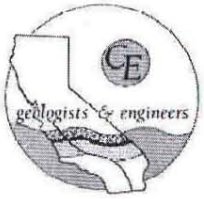
California



Environmental

PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT - PHASE I UPDATE AND SUBSURFACE ASSESSMENT – PHASE II

Western Portion of Huntington Beach Mall
Former Montgomery Wards Facility
7777 Edinger Avenue
Huntington Beach, California

FOR

J.H. SNYDER COMPANY
5757 Wilshire Boulevard, Penthouse 30
Museum Square
Los Angeles, California 90036

Attention: Mr. Michael Wise

CE Job No. EP102-2345 September 2005

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EXECUTIVE SUMMARY

A Preliminary Environmental Site Assessment - Phase I Update and Subsurface Assessment – Phase II was performed for the subject property (Montgomery Wards/Sears Parcel) located at 7777 Edinger Avenue, Huntington Beach, California. The scope of work for the Phase I meets ASTM E 1527-00 *Standard Practice for Preliminary Site Assessments*. The purpose of the Phase I report was to provide information regarding the potential for hazardous material impacts to the soil and groundwater beneath the subject property. The scope of the work included a site reconnaissance, research of land use records and other sources for preliminary indications of hazardous material use, storage, or disposal at the property. Subsurface testing was also implemented as part of this assessment.

The subject property is a leaky historic underground storage tank site. A fuel release occurred from an underground storage tank some time prior to 1986 when the tanks were removed. Assessment and remedial clean-up work occurred through the late 1980's into the early 2000's. The clean-up work included excavation and treatment of contaminated soil, implementation of a groundwater pump and treat system, installation of soil vapor extraction and air sparging, and the placement of horizontal extraction wells. This assessment work culminated during 2004 when a *Site Closure Report* was submitted to the lead enforcement agency, the Orange County Heath Care Agency. The Site Closure Report provided documentation that residual levels of gasoline hydrocarbons remain in both soil and groundwater beneath the site. Though high levels of residual fuel hydrocarbons remain (up to 14,500 mg/Kg of gasoline and 2 mg/Kg of benzene in soil; 9,500 mg/L TPH, and 2,000 µg/L benzene in groundwater), the site was recommended for low risk closure. The consultant for Montgomery Wards/Sears indicated that the remaining residual hydrocarbons in soil and groundwater would attenuate with time. The Orange County Health Care Agency issued a Remedial Action Completion Certificate, dated December 13, 2004 for the property. The Regional Water Quality Control Board – Santa Ana Region provided concurrence for the closure. The closure letter indicated "if redevelopment occurs and shallow contaminated soil is encountered, the soil must be handled to current regulatory requirements". All existing VES and groundwater wells, piping and treatment system components require proper abandonment.

Nearby contaminated sites were identified in the area of the subject property. These site include the Levitz Furniture facility located about 1,000 feet to the west, the former JC Penny facility, located about 300 feet to the east, the former Broadway Goodyear facility, located about 1,200 feet to the east, a former Chevron gas station, located about 2,000 feet to the east, and a former dry cleaners, located about 1,600 feet to the east-northeast of the property. Based upon review of the site assessment and clean-up data for these offsite properties, review of data for the release that had occurred on the subject property and the subsurface testing by California Environmental, no evidence was found to indicate that these offsite facilities have or will impact the soil or groundwater beneath the subject site.

EXECUTIVE SUMMARY

(continued)

Subsurface testing was implemented as part of this assessment work. The subsurface testing included a shallow soil vapor survey and soil sampling. The soil vapor survey did not reveal evidence of elevated levels of VOC's in the area of the former gasoline release. Detectable levels of methane and depressed oxygen with elevated CO_2 was noted in vapor probes excavated on the northern portion of the property. This indicates probable anaerobic biodegradation of petroleum hydrocarbons detected in that area.

Soil sampling was also initiated. Petroleum hydrocarbons were detected in soil beneath several of the hydraulic lifts and in soil in the area of the removed fresh oil tanks. Low levels of chlorinated solvents including PCE and degradation compounds cis 1,2-DCE, and 1,1-DCA were also found in shallow soil beneath the northern portion of the automotive center.

One hand auger testhole was excavated beneath the median of Edinger Avenue, south of the release which occurred on the former Montgomery Wards Automotive property. This testhole was excavated in order to evaluate for lateral spreading offsite from the release which occurred beneath the subject property. The testing appears to indicate that significant lateral spreading in soil beneath Edinger Avenue, extending to offsite properties to the south has not occurred. Impacted groundwater has migrated offsite.

Demolition of onsite structures and future grading work is contemplated. Significant quantities of asbestos containing building materials were identified primarily in the two-story department store building. Additional asbestos evaluation should be performed prior to demolition of the structures to verify quantities and to investigate areas not accessible during the two previous asbestos scoping surveys.

Future grading work on the southwestern portion of the property will encounter petroleum hydrocarbon impacted soils. Complete removal of the impacted soils would require excavations to depths of 15 feet. If redevelopment over the footprint of the residual contamination or immediate adjacent to the contamination is contemplated, then removal of the residual petroleum hydrocarbon contamination may be required by Orange County Health Care. Such development would also trigger the need to complete a risk assessment with soil vapor data as the probable input parameter to evaluate future indoor air quality.

This assessment has revealed evidence of historical recognized environmental conditions in connection with the subject property. The residual gasoline fuel hydrocarbon impacts in both soil and groundwater beneath the site have been issued a Remedial Action Completion Certificate by the lead enforcement agency, the Orange County Health Care Agency. No additional recognized environmental conditions were ascertained in connection with the property. Expanded site assessment research or additional subsurface testing is not recommended at this time.

INTRODUCTION

The following report presents the findings of the Preliminary Environmental Site Assessment - Phase I Update performed for the Montgomery Wards/Sears Parcel (subject property) located at 7777 Edinger Avenue, Huntington Beach, California. The scope of the Phase I study meets ASTM E 1527-00 *Standard Practice for Environmental Site Assessments* and included research of available land use records and other sources for preliminary indications of hazardous material use, storage or disposal at the property. The findings of this study are intended to provide information to the client regarding potential hazardous material impacts to the soil and groundwater beneath the site. Subsurface testing was also accomplished as part of this assessment. The assessment included testing of soil vapor and soil beneath the former automotive center portion of the property. The independent conclusions represent California Environmental's professional judgment based on the conditions that existed and the information and data available during the course of study. Factual information regarding operations, conditions, and test data provided by the client, the owner or their representatives have been assumed to be correct and complete. This report includes **GENERAL FINDINGS** and **CONCLUSIONS AND RECOMMENDATIONS**, which together with the remainder of this report are subject to the **NOTICE** at the end of the report.

The scope of work included:

- A walkover of the site.
- Review of underground storage tank files and industrial waste records maintained by the County of Orange Health Care Agency and the Regional Water Quality Control Board.
- Review of previous environmental site assessment reports on file with regulatory agencies.
- Review of historical USGS topographic maps.

- Research of historical Sanborn Fire Insurance Maps maintained by EDR Company.
- Contact with the South Coast Air Quality Management District to review their files.
- Review of Oil Field Maps and oil well records maintained by the State of California Division of Oil, Gas, and Geothermal Resources.
- Review of the following lists and maps of suspect or known contaminated sites:
  - California Regional Water Quality Control Board, (RWQCB) - *Computer Case Listing of Reported Underground Tank Leaks*, covering Orange County.
  - California Governor's Office of Planning and Research - *Hazardous Waste and Substance Sites - Cortese List and Contaminated Wells List, which includes the Bond Expenditure Plan* (BEP) sites.
  - California Environmental Protection Agency, Department of Toxic Substances Control - *CalSites List.*
  - California Department of Health Services, *Hazardous Waste Information System* (HWIS) and Tanner Report.
  - California Integrated Waste Management Board, *Solid Waste Information System* - (SWIS) List.
  - State Water Resources Control Board, *Solid Waste Assessment Test Program* (SWAT).
  - State Water Resources Control Board, *Hazardous Substance Storage Container Database* (UST).
  - U.S. Environmental Protection Agency Superfund Program - *National Priorities List* (NPL).
  - U.S. Environmental Protection Agency - *Comprehensive Environmental Response, Compensation, and Liability Information System* (CERCLIS).
  - U.S. Environmental Protection Agency, *Toxic Release Inventory System* (TRIS).
  - U.S. Environmental Protection Agency, *Resource Conservation and Recovery Information, System Treatment, Storage and Disposal Facilities*, (RCRIS-TSDF).
  - U.S. Environmental Protection Agency, *Resource Conservation and Recovery Information System, Large Quantity Generators*, (RCRIS-LQG).
  - U.S. Environmental Protection Agency, Resource *Conservation and Recovery Information System, Small Quantity Generators*, (RCRIS-SQG).

- U.S. Environmental Protection Agency - *Superfund Amendment and Reauthorization Act, Title III*, (SARA Title III).
- U.S. Environmental Protection Agency, *Emergency Response Notification System* (ERNS).
- U.S. Environmental Protection Agency, *Facility Index System* (FINDS).
- U.S. Environmental Protection Agency, *Civil Enforcement Docket* (DOCKET).

- A review of government records databases of suspect or known contaminated sites was performed by EDR Company. The results of the search are summarized in this report. The report is enclosed in **APPENDIX IV**.
- Conduct soil and soil vapor sampling.
- Preparation of this report.

SITE DESCRIPTION

LOCATION AND DESCRIPTION

The subject property is located on the western portion of the Huntington Beach Mall, north of Edinger Avenue, south of Center Drive, within the City of Huntington Beach, California, see **VICINTIY MAP**. The historic street address associated with the subject property is 7777 Edinger Avenue. More recent street addresses assigned to the property include 7531 Edinger for the automotive center and 7601 Edinger for the department store building.

SITE RECONNAISSANCE

The site conditions were observed during a reconnaissance conducted by Mr. Mark Tamberino of California Environmental during July 2005. An Environmental Field Reconnaissance Questionnaire was completed during the site reconnaissance. The Questionnaire is included in **APPENDIX I**. The features described below are shown on the enclosed **PLOT PLAN** and **PLOT PLAN DETAIL**. Photographs of the subject property are included as **PLATES 1-8.**

Description of Property

The subject property is roughly rectangular shaped parcel located on the extreme western portion of the Huntington Beach Mall. The property consists of approximately 13.5 acres on the western portion of the Huntington Beach Mall property which encompasses about 53 acres. The property is developed with two structures. A former automotive repair building is present on the southwest corner of the property. That one-story building consist of about 18,000 square feet. The southern 2/3 of the building includes a basement area which is about 15 feet below grade. This building is vacant and unoccupied but was most recently utilized for automobile service and repair. Seven underground storage tanks were historically present on the property. The tanks were used for storage of new and used motor oil and for fuels. Historic releases, assessment, and remedial clean-up of releases associated with the fuel tanks are discussed under the **PREVIOUS WORK** and **Underground Tank** sections of this report.

A 92,000 square foot two-story retail building is present on the central eastern portion of the site. This building is currently unoccupied but formerly housed the operations of Montgomery Wards department store. The first floor of the facility includes retail space, offices, stockrooms, and a shipping and receiving facility. Additional retail space, offices, stockrooms, and a beauty salon were present on the second level.

Both buildings are constructed with a combination of concrete block, concrete tilt-up walls, and concrete floors. The department store building interior finishes include dry wall, carpet, ceramic floor tile, linoleum floor tile, and roof panels. It appears that both buildings were constructed during the mid-1960's.

Hydraulic systems are present in both the automotive center and the retail building. Several hydraulically operated elevators are located in the department store structure. Both aboveground and in-ground hydraulic lifts are located within the automotive facility. The department store and automotive center are surrounded by asphalt paved parking areas. The northern portion of the property is currently utilized for storage of construction materials for redevelopment of the Huntington Beach Mall.

Groundwater monitor wells, vapor extraction wells, and horizontal piping systems were observed on the southern portion of the automotive repair facility. These wells were utilized during the assessment and remedial clean-up of the fuel release which occurred beneath the southern portion of the automotive repair facility. A remedial treatment system compound is located at the extreme southwest corner of the property. The equipment within this compound is currently inactive and includes control panels, carbon vessels, pumps, and valves.

Adjacent Properties

The subject property is bound to the north by Center Drive with commercial property beyond; by Edinger Avenue to the south with commercial property including retail and restaurant space beyond; to the west by a railroad right-of-way and drainage channel; and to the east by the Huntington Beach Mall and adjacent parking areas. The San Diego (405 Freeway) is located several hundred feet to the north of the property.

Topography and Drainage

The subject property slopes towards the south. Drainage from the site is by sheetflow towards the adjacent city streets.

Past Uses of the Property

The subject property has historically been used for retail and automotive repair purposes. During the site walkover evidence of hazardous materials use within the automotive center included the presence of waste oils, greases, automotive battery storage, and patched asphalt indicative of former underground tank locations.

Use of Hazardous Substances

No evidence of current hazardous substance use was observed on the property. Hazardous substances were historically used on the automotive center portion of the property. These uses included fuels, oils, degreasers, and other related automotive by-products.

Storage Tanks

Underground and aboveground storage tanks have historically been present at the subject property. Seven underground tanks were removed from the site and releases related to those underground tanks are discussed under the **PREVIOUS WORK** and **Underground Storage Tanks** sections of this report. Small aboveground fresh oil tanks are present within the former automotive center. Minor oil staining and small containers of what appears to be waste oil were also observed within the automotive center building.

Hydraulic hoists are located within the vacant Montgomery Ward Automotive facility. Some of the hydraulic oil reservoirs are located above ground within the basement of the automotive facility. No leaks of hydraulic oil were observed from the hydraulic oil reservoirs observed within the basement of the structure. Minor oil staining was observed on the concrete surface near two hydraulic hoists.

A sump was observed within the basement of the Montgomery Ward Automotive facility. The sump contained water at the time of the site reconnaissance, as the entire basement was flooded. No sheens and/or odors were noted within the sump at the time of the site reconnaissance. Previous reports have indicated the presence of a three stage automotive clarifier. That clarifier was not observed during the current site reconnaisance. A suspect clarifier location is identified on the **PLOT PLAN DETAIL**. Other aboveground storage tanks related to the groundwater/vapor treatment system are located on the southwest corner of the property were also observed.

Containers of Hazardous or Unidentified Substances

Small containers, typically 5-gallons or less, what appeared to be waste oil were observed in several locations within the automotive building. No other evidence of containers of hazardous or unidentified substances were observed at the subject property at the time of the site reconnaissance.

Solid Waste Disposal

Disposal bins were observed adjacent to the north of the retail building and the automotive building. The disposal bins contained non-hazardous debris at the time of the site reconnaissance. No other evidence of onsite disposal or landfill of solid waste material was observed on the subject property at the time of the site reconnaissance.

Poly-Chlorinated Biphenyl's (PCBs)

Slab mounted transformers maintained by Southern California Edison are located throughout the mall property. A letter from SCE, dated March 12, 2002, indicated that "it is highly unlikely that the transformers serving the facility contain PCBs at concentrations requiring special management under the EPA rules". PCB-type containing transformers were not observed on the subject property at the time of the site reconnaissance.

Fluorescent lights were observed in the subject property. Fluorescent light ballasts manufactured prior to 1977 (and fluorescent light ballasts without a date of manufacture) may have ballasts capacitors that contain PCBs, which is recognized by the EPA as a suspect carcinogen. Used fluorescent lamp tubes are considered to be hazardous mercury-bearing waste requiring proper disposal in accordance with local, state, and federal requirements. The onsite ballasts were not inspected during the site reconnaissance. Due to the date of construction of the subject buildings, it is recommended that the fluorescent light ballasts be inspected for PCB content labels prior to disposal.

Asbestos Containing Building Materials (ACM)

Toltest Inc. conducted an asbestos inspection of the former Montgomery Wards buildings during April 2001. 163 samples of suspect materials were collected and analyzed. Asbestos containing building materials were identified including carpet and tile mastic, pipe insulation, hot water tank installation, roof mastic, and roof-kick sheets. During August 2005, TOPA Environmental conducted limited asbestos sampling at the property. Additional materials identified as asbestos containing during that survey included drywall finish material in both the auto center and retail store. The complete asbestos reports including the approximate quantities of the materials identified are included in **APPENDIX VI**.

Additional sampling will be required prior to building demolition to observe inaccessible areas such as interior wall cavities, built up roofing materials, and areas which were not investigated as a part of these surveys.

Wastewater Disposal Systems

An idle groundwater treatment system associated with remedial clean-up of the former Montgomery Ward Automotive facility is present onsite. The system located adjacent to the Montgomery Ward Automotive facility previously discharged treated water to the adjacent drainage channel under the NPDES permit CAG918001. No evidence of wastewater treatment or disposal systems was observed on the subject property during the site reconnaissance.

Radon

Radon hazard assessment was not included in the scope of this study. However, the EDR research report indicates the level of radon at 14 sites located within the zip code of 92647 in Orange County were below one picoCurie per Liter (pCi/L). This concentration is well below the Federal Action level of four pCi/L.

ATC Environmental, Inc. prepared a *Phase I Environmental Site Assessment, Huntington Beach Mall. 7777 Edinger Avenue, Huntington Beach, California*, dated October 17, 1997. The assessment included the collection of six radon gas samples from the adjacent Huntington Beach Mall. Six charcoal scintillation detectors were placed at various permanently occupied locations throughout the at-grade level of both the main mall and the strip mall structures. The samples were obtained from the Mall Office (New Accounts Department), Maintenance Department (Lounge), Security Office, and Staples

Store Managers Office. Radon levels up to 0.6 pCi/L were detected. The radon levels detected are well below the Federal Environmental Protection Agency action level of 4.0 pCi/L.

Lead

Sampling of suspect lead in paint was not included in the scope of work for this project. Lead content in paint was significantly reduced in 1977. Due to the date of construction of the subject buildings (1960's), it is possible that lead based paint was utilized onsite. The paint coatings of the structures were in good condition at the time of the reconnaissance. Deteriorated surfaces should be tested for lead coatings prior to demolition.

Wells

Five onsite and one offsite groundwater monitoring wells were observed near the automotive repair facility during the site walkover. The approximate locations of the wells are shown on the attached **PLOT PLAN DETAIL**. About 10 vapor extraction wells were also noted beneath the southwest corner of the property. Several areas of horizontal VES wells and horizontal interceptor trenches are located beneath the southwest portion of the auto center. The groundwater wells and vapor extraction wells are associated with the former assessment and remedial clean-up of the fuel release which occurred beneath that portion of the property. These wells should be abandoned under permits issued by the Orange County Health Care Agency. No other evidence of dry wells, irrigation wells, injection wells, abandoned wells, monitoring wells, or other wells was observed on the subject property at the time of the site reconnaisance.

Odor

No evidence of strong, pungent or noxious odors was noted on the subject property at the time of the site reconnaissance.

Stressed Vegetation

No evidence of stressed vegetation was observed on the subject property at the time of the site reconnaissance.

Stained Soil or Pavement

Automotive batteries were previously stored and serviced within the northern portion of the former Montgomery Ward Automotive Center structure. The concrete flooring located within the battery storage area is significantly degraded. The concrete flooring appeared to be etched from spillage of battery (sulfuric) acid. Areas of oil stained concrete were also observed within the automotive repair facility. No other evidence of staining or residue was observed on the subject property at the time of the site reconnaissance.

Pits, Ponds, or Lagoons

No evidence of pits, ponds, and/or lagoons was observed on the subject property at the time of the site reconnaissance.

Potable Water Supply

Water is supplied to the subject property by the City of Huntington Beach.

Other Conditions of Concern

No other conditions of environmental concern regarding potential sources for soil and groundwater contamination were observed on the subject property at the time of the site reconnaissance.

SITE DRIVE-BY

A drive-by of the area within one-quarter mile of the property was conducted to help identify nearby sites that possibly use, store or generate hazardous materials. The area surrounding the subject property consists of commercial property. A Mobil/Exxon service station is located approximately 2,000 feet east of the subject property on the southwest corner of Edinger Avenue and Beach Boulevard. The Mobil/Exxon is currently undergoing a remedial cleanup of fuel impacted groundwater. The regional groundwater gradient is reportedly to the south. A list of selected environmental risk sites identified within a one-quarter mile radius of the subject property is included in the **STANDARD ENVIRONMENTAL RECORDS SOURCES** section of this report.

PREVIOUS WORK

California Environmental reviewed previous site assessment reports prepared by environmental consultants for the subject property, the Huntington Beach Mall, and the Mobil/Exxon service station located offsite to the east. The environmental reports reviewed are listed in the **REFERENCES** section of this report.

Montgomery Ward

TRC Environmental Consultants (TRC) prepared a *Preliminary Site Assessment, Montgomery Ward Service Center, Huntington Beach, California*, dated March 9, 1987. The work was performed at the request Orange County Health Care Agency (OCHCA). Two underground gasoline storage tanks were removed in October 1986. Gasoline impacts were detected within the tank pit. TRC installed three groundwater monitoring wells near the tank pit. Elevated levels of petroleum hydrocarbons were found in both soil and groundwater. Low levels (1-10 µg/L) of chlorinated solvents (PCE, TCE and 1,1,1-TCA) and breakdown products were found in groundwater samples from two of the three groundwater monitoring wells. The assessment determined that approximately 260 cubic yards of impacted soil existed within the vicinity of the tank pit. Liquid product was detected in the wells. TRC proposed to chemically treat the soil onsite and to backfill the excavation with the treated soil.

TRC Environmental Consultants prepared a *Phase II Site Assessment and Proposed Phase III Investigations Workplan, Montgomery Ward Service Center, Huntington Beach, California*, dated October 26, 1987. The recommended soil remediation program consisted of spreading and aerating the impacted soil followed by chemical treatment (hydrogen peroxide) by Ensotech, Inc. Following the

treatment process the tank excavation was backfilled with treated soil and clean imported soil. The treated soil was sampled and reported to be below 100 ppm. TRC proposed to install three additional groundwater monitoring wells and up to 40 soil borings. TRC also proposed the removal of four oil underground storage tanks located to the west of the service bays. This report also contained the *Final Report* prepared by Ensotech, Inc., dated October 12, 1987. Ensotech treated approximately 340 cubic yards of soil removed from the former gasoline tank pit.

TRC Environmental Consultants prepared a *Phase III Investigation, Montgomery Ward Service Center, Huntington Beach, California*, dated July 29, 1988. The investigation consisted of a soil vapor survey to assess the extent of the hydrocarbon plume, drilling two downgradient groundwater monitoring wells, and sampling and analysis of groundwater from the monitoring wells. Soil vapor samples were obtained from 39 locations. Up to 710,000 ppm TPH were found in vapor within close proximity to the former gasoline USTs. Two groundwater monitoring wells were installed as part of this assessment. Five groundwater monitoring wells were gauged and sampled on June 1, 1988. Laboratory analysis of the five groundwater samples found TPH (up to 89,000 ppb), benzene (up to 1,400 ppb), toluene (up to 2,600 ppb), ethylbenzene (up to 1,500 ppb), and xylenes (up to 1,300 ppb). The groundwater data indicated that the hydrocarbon plume extended offsite beneath Edinger Avenue. Additional groundwater wells were recommended to further assess the eastern and southern extents of the hydrocarbon plume.

Environmental Audit, Inc. (EAI) prepared a *Revised Remedial Action Plan (RAP), Montgomery Ward Service Center, Huntington Beach, California*, dated September 27, 1990. The purpose of the RAP was to recover free product and remediate dissolved phase groundwater impacts. EAI proposed to install an

interceptor trench and sump system beneath the southern and western boundaries of the property and install two additional offsite groundwater monitoring wells.

EAI prepared a *Letter regarding a Notice of Violation-Failure to Close Underground Storage Tanks,* dated August 24, 1990. Four oil USTs (two 550-gallon and two 1,000-gallon) were identified on the western portion of the Montgomery Ward property. The four USTs were removed in February 1991.

EAI prepared *Groundwater Cleanup Monitoring and Reporting Program Reports, Order 91-45, NPDES No. CA8000215, Groundwater Remediation Project,* for the time period August 1991 through 1996. A groundwater pump and treat system was installed and treated approximately 1.65 million gallons of groundwater to below drinking water standards. EAI requested that the treatment system be shut down due to the reduction of benzene to asymptotic conditions. EAI requested continued monitoring of the wells on a quarterly basis.

EAI prepared a *Corrective Action Plan (CAP),* dated January 22, 1999. The CAP was a response to a letter from the OCHCA dated December 14, 1998 which requested submittal of a Corrective Action Plan. The CAP included the results of the additional site assessment and a feasibility study of alternative remedial technologies. EAI prepared a summary of the history of remedial activities at the site. The pump treatment system was deactivated. Following the shutdown of the remedial treatment system, the dissolved contaminant levels rebounded to levels above the low risk thresholds outlined by the RWQCB. The system was then restarted. EAI surmised that residual soil impacts continued to impact groundwater. In 1997, 32 borings were advanced onsite. Elevated levels of TPH and BTEX were found in soil beneath the property. In 1999, three additional soil borings were drilled to fifteen feet

bgs. Soil samples were analyzed for TPHg, BTEX and MtBE. MtBE was not confirmed by EPA Method 8260. From September 1991 to July 1998, more than 5 million gallons of groundwater had been extracted and treated. The CAP recommended soil excavation, dual phase extraction, and air sparging for the site. The CAP was approved by the OCHCA on May 13, 1999.

EAI prepared a *Soil Vapor Extraction and Monitoring Report,* dated May 17, 2000. Four 30 foot long sparge wells were utilized to extract residual fuel from soil/groundwater beneath the site. The report presented the results of soil vapor extraction and air sparging soil treatment system startup on October 18, 1999 through system shut down on April 19, 2000.

A Site Conceptual Model and Workplan Report was prepared and submitted to the OCHCA by ENSR International. The *Site Conceptual Model* recommended confirmation borings to assess the concentrations of contaminates remaining in the soil. The OCHCA approved the Site Conceptual Model and Workplan prepared by ENSR International in October 2001. The Workplan proposed drilling and sampling of ten borings to determine the current subsurface containment concentrations. ENSR International prepared a Groundwater Monitoring Report – 4th Quarter 2001, dated December 19, 2001. Four groundwater monitoring wells were gauged and sampled in November 2001. The groundwater contained total petroleum hydrocarbons up to 8,000 µg/L (MW3), benzene up to 850 µg/L (MW3), and MTBE (in the offsite well MW5 at 2.7 µg/L). Low levels (18 µg/L) of chlorinated and volatile organic compounds were also found.

ENSR prepared a *Groundwater Monitoring Report Fourth Quarter 2003*, dated December 2003 and a *Site Closure Report*, dated April 2004 for the subject property. The groundwater monitor data included

sampling of five groundwater monitor wells located on the property. Elevated levels of residual gasoline hydrocarbons were detected. The highest level of benzene detected was 2,000 µg/L as found in MW4A. Low to moderate levels of TPH as gasoline (730-9,500 mg/L), and other gasoline constituents typically below 1 ppm were detected. Chlorinated solvents were not detected in groundwater. The Site Closure report contained the results of soil sampling conducted from 10 post closure assessment borings and during the installation of one groundwater monitor well (MW4A). The locations of these post closure borings are shown on the attached **CLOSURE BORING PLOT PLAN**. Elevated levels of petroleum hydrocarbons as gasoline and benzene were detected in several of the borings. Up to 14,500 mg/Kg of TPH as gasoline and 12.5 mg/Kg of benzene were detected in Boring B6 at a depth of 9 1/2 – 10 feet. The report provides a summary of the remediation efforts conducted at the property from the mid-1980's through 2001. ENSR recommended that the lead enforcement agency issue a no further action letter indicating that the residual gasoline impacts in soil and groundwater would attenuate with time.

On December 13, 2004, the County of Orange Health Care Agency issued a Remedial Action Completion Certificate for the subject property. The Regional Water Quality Control Board – Santa Ana Region provided concurrence for the case closure. A copy of the County of Orange Health Care Agency letter is attached in **APPENDIX II**.

The following facilities are located on or adjacent to the Huntington Beach Mall property. All of these facilities are located to the east or southeast of the subject property. These offsite nearby facilities are not expected to have an impact on the soil or groundwater quality beneath the subject property.

Former Chevron Service Station (Macaroni Grill) – 2000 Feet East

A Chevron service station occupied the southeast corner of the mall property from 1972 through 1995. Two 10,000-gallon, one 4,000-gallon gasoline, one 1,000-gallon waste oil underground storage tanks were removed from the former Chevron service station in 1988. Impacts to soil and groundwater were identified. The tanks were replaced with three 10,000-gallon underground gasoline storage tanks. From 1988 through 1990 eleven groundwater monitoring wells were installed on the property. In 1994/1995, three 10,000-gallon gasoline and one 1,000-gallon waste oil underground storage tanks were removed under the supervision of the City of Huntington Beach Fire Department. The property is currently developed with a Macaroni Grill Restaurant.

The OCHCA issued a high priority case status in November 2000 due to the presence of MtBE in groundwater and the proximity to of the site to a municipal groundwater production well. The well (HB-10) is located approximately 2,000 feet southeast of the subject property. Chevron Products Company was instructed by the OCHCA to develop an Interim Remedial Action Plan and a Site Conceptual Model for the site. The *Interim Remedial Action Plan* was completed by Harding ESE in December 2000. The Site Conceptual Model was completed by Harding ESE in September 2001.

Quarterly groundwater monitoring has occurred at this facility from 1992 to the present. Groundwater monitoring wells are located adjacent to the north, south and west of the onsite structure. The six groundwater monitoring wells include multiple completion sensing zones. Nine groundwater monitoring wells were gauged and sampled on December 11, 2001. Depth to groundwater ranged from 7.85 feet bgs to 16.83 feet bgs. The direction of the groundwater gradient was measured at 0.013 ft/ft. to the south. The groundwater plume from the offsite Mobil service station has commingled with the Chevron

plume. The highest concentrations of fuel and aromatic hydrocarbons in groundwater were found in RSLA-11 to the west of the former service station. The highest concentration of MtBE was found in DW-01B located to the south of the former pump islands.

The current status of the project is remediation via monthly purging of the groundwater monitoring wells. Dual phase vapor extraction test was performed, however, the results of the test were not satisfactory. A workplan was submitted to and approved by OCHCA for the installation of four additional groundwater monitoring wells west of the existing Macaroni Grill within the Huntington Beach Mall parking lot.

***Former Dry Cleaners* (1,200 Feet East)**

ATC Environmental, Inc. prepared a *Subsurface Investigation, Huntington Beach Mall, Unit 86, 7777 Edinger Avenue, Huntington Beach, California*, dated November 4, 1996. The *Subsurface Investigation* was performed following identification of a dry cleaning facility (unit 86) during a *Phase I Environmental Site Assessment* by ATC, dated October 1996. The dry cleaning facility was closed in 1993. Five hand auger borings were excavated to a maximum depth of ten feet bgs near the floor drain within a boiler room and area of staining adjacent to the former dry cleaning equipment. Grab groundwater samples were obtained from three of the five borings. ATC installed seven groundwater monitoring wells in October 1991. Depth to groundwater was approximately 8 feet bgs. Soil samples contained PCE concentrations ranging from 157 to 337 ppb at two feet bgs. The levels of PCE decreased (nondetect to 14 ppb) at five feet bgs. PCE concentrations in groundwater ranged from 8.3 to 410 ppb. The highest concentration was found in wells around the former dry cleaning equipment area.

Low concentrations of trichloroethene, 1,1-dichloroethene and vinyl chloride were also detected. Additional subsurface site assessment activities were recommended.

Rincon Consultants, Inc. prepared a *Site Assessment Report, Former Dry Cleaners Facility 7777 Edinger Avenue, Huntington Beach, California*, dated February 17, 1998. The report utilized data from two previous assessments prepared by ATC Environmental (report date November 4, 1996) and Harding Lawson Associates (dated July 15, 1997) to define the lateral extent of the chlorinated solvent impacts. Harding Lawson conducted a second round of groundwater assessment. Eighteen soil and groundwater probes were advanced throughout the property to determine the lateral extent of the impacted groundwater. The assessment identified impacts along the sewer line, upgradient from the dry cleaners, and downgradient. PCE up to 100 ppb were identified adjacent to the west of the former dry cleaning facility. Elevated levels of 1,1,1-trichloroethane (up to 93 µg/L) were detected in two borings located to the north of the dry cleaning facility. Rincon concluded that the highest concentrations of VOCs were beneath the footprint of the former dry cleaning facility.

Harding Lawson Associates prepared a *Well Abandonment Report for the Former Dry Cleaners, Unit 86, 7777 Edinger Avenue, Huntington Beach, California*, dated June 17, 1998. The wells were abandoned (Permit no. 98-06-23) by removing the casings.

The California Regional Water Quality Control Board-Santa Ana Region issued a *Case Closure* letter for the former dry cleaners located at 7777 Edinger Avenue, Huntington Beach, California, dated June 1, 1998. The letter indicated that based upon the low concentrations and small amount of mass of VOCs that is present in soil and groundwater, the limited volume of groundwater that has been impacted, and

the limited lateral extent of VOCs in groundwater, the site does not appear to be a significant threat to the beneficial use of groundwater in this area.

Former Broadway/Goodyear Auto Service Center (now vacant 1,000 feet East)

Dames and Moore prepared a *Phase I Preliminary Site Assessment for the Broadway Store and the Broadway Tire Center, 7777 Edinger Avenue, Huntington Beach, California*, dated March 24, 1993. The tire center was leased to Fidesta Tire followed by a Goodyear Certified Auto Service. Underground storage tanks were not present onsite. Seven hydraulic hoists were present within the service bays. Two aboveground storage tanks containing new and used antifreeze were located within a maintenance room. A Safety Kleen parts cleaners was used onsite. No evidence was found to suggest that the Broadway store or tire center had been affected by improper use, storage, or disposal of hazardous materials from an on-site source. Dames and Moore concluded that seven sites in the immediate vicinity of the property have been identified as having impacted groundwater. Installation of three groundwater monitoring wells to identify groundwater impacts from these offsite facilities was recommended.

Dames & Moore prepared a *Report of Groundwater Investigation, Broadway Stores and Tire Center, 7777 Edinger Avenue, Huntington Beach, California*, dated June 28, 1994. The investigation was conducted to identify potential impacts to groundwater beneath the property. Three groundwater monitoring wells were installed onsite. Two wells were installed adjacent to the north and northeast of the Broadway store and the third adjacent to the north of the Tire Center. The groundwater samples obtained from each monitoring well were analyzed for semi-volatile organic compounds, total recoverable petroleum hydrocarbons, PCBs/organochlorine pesticides, total petroleum hydrocarbon-fuel characterization, Title 22 metals, volatile organic compounds, and aromatic compounds. No detectable

concentrations of semi-volatile organic compounds, total petroleum hydrocarbons, PCB's/organochlorine pesticides, and/or total petroleum hydrocarbons were found. Benzene was detected in the upgradient well (MW3) at 59 µg/L per EPA Method 8240. Straight chain hydrocarbons were detected at concentrations of 7 µg/L in groundwater samples from MW1 and MW2 located adjacent to the Broadway Store. Dames & Moore concluded that the concentrations of benzene emanated from the Chevron and Mobil Service stations. Further subsurface site assessment activities were not recommended.

ATC Environmental Inc. prepared a *Subsurface Investigation, Former Broadway Tire Center, 7777 Edinger Avenue, California*, dated July 31, 1996. The purpose of this investigation was to evaluate for the potential impacts associated with hydraulic hoists and possible former underground storage tanks near the building. There was no regulatory or physical evidence that USTs existed onsite. Seven soil borings were excavated to a maximum depth of seven feet bgs. Selected soil samples were analyzed for total petroleum hydrocarbons and PCBs per EPA Methods 8015 and 8080. TPH was detected in four of the seven soil samples at concentrations ranging from 100 to 46,000 mg/kg. No PCB's were found in soil. A soil vapor survey was also conducted adjacent to the structure. Five soil vapor probes were advanced to five feet bgs. Soil vapor samples were analyzed for BTEX and TPH. No aromatic or fuel hydrocarbons were found in the five soil vapor samples. ATC recommended additional site assessment activities to define the extent of the heavy oil impacts in soil.

ATC Environmental Inc. prepared a *Subsurface Investigation, Second Phase, Former Broadway Tire Center, 7777 Edinger Avenue, California*, dated September 25, 1996. On September 4, 1996, ATC advanced twelve borings onsite. The purpose of this investigation was to evaluate the extent of the

hydrocarbon impacted soil identified in the earlier borings. On September 4, 1996, ATC excavated twelve borings within the service bays. Borings were excavated to a maximum depth of nine feet bgs. Groundwater was encountered at eight feet bgs. Grab groundwater samples were obtained from six borings and analyzed for TPH as hydraulic oil per EPA Method 8015M. Laboratory analysis found concentrations above 100 ppm in three soil samples (SB5D at 4 and 8 feet and SB11 at 8 ft.). No detectable concentrations of hydraulic oil were found in the groundwater laboratory analysis. The estimated volume of impacted soil was 195 cubic yards. ATC recommended that the impacted soil be removed from the subject property.

ATC Environmental Inc. prepared a *Status Report, Excavation/Oversight Activities, Former Goodyear Tire Center, 7777 Edinger Avenue, California*, dated April 14, 1997. First Environment, Inc. was retained by Goodyear to remove the impacted soil. The removal of impacted soil was initiated following approval of a Workplan by the City of Huntington Beach Fire Department on March 4, 1997. The City of Huntington Beach Fire Department required a soil cleanup level of 1,000 mg/kg. On March 10, 1997, ATC observed the removal of three hydraulic hoists by Environmental Dynamics, Inc. A fourth area of excavation (6 ft. long and 2 ft. wide) was made to the north of the service bays. Verification soil samples obtained following the removal of the hoists and impacted soil were below 100 mg/kg. Approximately 55 cubic yards of soil and rinsate from pressure washing stained concrete were disposed offsite.

Harding Lawson, Inc. prepared a *Near Surface Soil Sampling, Huntington Beach Mall, 7777 Edinger Avenue, California*, dated April 18, 1997. The purpose of the soil sampling was to evaluate for petroleum hydrocarbons in the subsurface beneath a surface stain area along the west side of the

Goodyear facility and to identify other potential sources of impacts within the facility. Three hand auger testholes were excavated to a maximum depth of five feet bgs. Soil samples were obtained at three and five foot intervals. The three foot samples and on a five foot sample were analyzed for total petroleum hydrocarbons per EPA Method 8015. Laboratory analysis found heavy oil (C24-C44) at 147 mg/kg in B1 at three feet bgs. No other petroleum hydrocarbons were found in the laboratory analysis. The City of Huntington Beach Fire Department issued case closure for the site.

Former JCPenny's/Firestone ***(now vacant 300 Feet East)***

The former JC Penny was listed by OCHCA under Case Nos. 86 #UT234 and #84UT8. A leak from an underground gasoline storage tank was detected at the former JCPenny Auto Center in 1978/1979. In 1979, gasoline reportedly seeped into the basement of the JCPenny building. Converse Environmental completed a subsurface site assessment in 1982. The assessment identified gasoline beneath the JCPenny Auto Center. In 1984, over four feet of product was measured, an air stripper was installed, and the free phase (gasoline) was removed using pump and treat technologies. A 500-gallon waste oil UST was removed in 1986. A waste oil tank was installed in early 1987. The facility closed in 1989. A 550-gallon waste oil tank was removed in 1990 after Firestone's lease with JCPenny had expired. A NPDES permit was renewed in 1990. A fixed film bioreactor and carbon polisher replaced the air stripper in 1990. The bioreactor was in operation from 1992 through 1995 and treated over 2.5 million gallons of groundwater. In 1993 the auto center was demolished and a second waste oil tank was discovered adjacent to the southeast of the building and removed. Following the demolition of the building, impacted soil was excavated and disposed of offsite. GTI requested closure for the soil portion of the subsurface site assessment in November 1993. Closure was not granted. In 1995, GTI

requested to conduct post remediation monitoring and shut down of the remediation system. The remediation system is currently inactive.

Groundwater Technology, Inc prepared a *Used Oil Tank Removal, Former JCPenny Auto Center No. 1069, 7777 Edinger Avenue, Huntington Beach, California*, dated September 19, 1990. On August 29, 1990, West Hazmat excavated a 550-gallon fiberglass waste oil tank located to the north of the structure. One sample was obtained from the native soil at approximately four feet below grade on the north sidewall of the excavation. The soil sample was analyzed for total recoverable petroleum hydrocarbons using Method 418.1. The laboratory analysis was nondetect for total recoverable petroleum hydrocarbons.

OCHCA prepared a *Remedial Action Completion Certification, Underground Storage Tank Case 86UT234*, dated October 4, 1995. The letter confirmed the completion of the site investigation and remedial action for the 550 gallon waste oil underground storage tank. A 550-gallon waste oil tank was removed from adjacent to the north of the structure in October 9, 1986. Laboratory analyses found total petroleum hydrocarbons (170 ppm), methylene chloride (8.9 ppm), and PCE (0.66 ppm) in soil. Approximately 96 cubic yards of soil was disposed offsite at Casmalia Resources in May 1987. Chlorinated solvents were found in the downgradient well. Four groundwater monitoring wells were installed within the tank zone. All four wells were checked for the presence of dense non-aqueous phase liquids (DNAPL) by sampling the bottom of the monitoring wells. DNAPL was not found. Quarterly groundwater occurred from April 1992 through May 1995. Low levels of chlorinated solvents 1,1-DCA (1.2 µg/L), 1,2-DCA (2.4 µg/L), 1,2-DCE (5.8 µg/L), TCE (0.6µg/L) and PCE (1.4 µg/L) in groundwater were detected in May 1995. OCHCA indicates that the contaminant levels have remained

very low for a long period of time showing no increasing trends in the concentrations of the chlorinated solvents. The removal of the source has been successful in eliminating the threat to groundwater from chlorinated solvents.

Fluor Daniel GTI prepared a report on the *Deeper Water Bearing Zone Assessment, Former JCPenny Facility, 7777 Edinger Avenue, Huntington Beach, California*, dated April 24, 1998. The purpose of the assessment was to determine the impact of fuel hydrocarbons in deeper soil and deeper groundwater zones. The report indicated that dissolved hydrocarbons were present in the deeper aquifer within the source area.

IT Corporation prepared a *Semi-Annual Groundwater Monitoring Report – March 2000, for the JCPenny's Store No. 1060, 7777 Edinger Avenue, Huntington Beach, California, OCHCA Case No. 84UT8*, dated March 16, 2000. A total of twenty-two wells were gauged for free product. The groundwater gradient at the site is towards the southwest at 0.003 foot per foot. Sixteen monitoring wells (nine onsite and seven offsite) were purged and sampled. Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline and benzene, toluene, ethylbenzene, xylenes and MtBE per EPA Methods 8015 and 8020. Confirmation analysis was conducted on groundwater samples from four wells by EPA Method 8260. The results of the laboratory analyses indicate that dissolved phase hydrocarbons are present in one well in the deeper saturated zone beneath the site. TPHg, benzene, and MtBE were detected at concentrations 350 µg/L, 0.9 µg/L, and 1.4 µg/L, respectively. Piezometers installed in the source area confirmed the groundwater zone at a depth of 30 to 35 feet bgs is under lower hydrostatic pressure and the groundwater gradient is different that the upper saturated zone. The presence of fuel hydrocarbons in the deeper groundwater zone indicates that the source area has likely

impacted the deeper groundwater zone. The benzene concentrations have shown a steady decrease within this zone.

IT Corporation prepared a *Request For Closure, Former JCPenny UST, 7777 Edinger Avenue, Huntington Beach, California, OCHCA Case No. 84UT8*, dated December 19, 2000. IT Corporation requested site closure from the OCHCA based upon source removal, the absence of MtBE, the defined deep vertical and lateral extent of impacts, and the reduced impacts in soil and groundwater. Three source areas were removed from beneath the property. The underground storage tanks were removed in 1983; free phase product was actively removed from 1984 through 1991 (no free phase hydrocarbons were measured since 1992); and approximately 11,190 cubic yards of impacted soil was removed by excavation from the property in 1993. No MtBE was found in the laboratory analysis of groundwater samples from the shallow and deeper groundwater zones. A narrow strip of impacts in soil remain offsite beneath the sidewalk. This area was not accessible during the soil excavation work. Groundwater remediation efforts were somewhat ineffective due to the high organic (peat) content in soil and the hardness of groundwater.

California Environmental was present at a meeting with the Orange County Health Care Agency during July where closure of the JC Penny facility was discussed. The County, in the process of preparing formal site closure for the property has requested that JC Penny prepare a Risk Assessment via implementation of a soil vapor survey to evaluate potential hazards associated with redevelopment of the property. The Orange County Health Care Agency was preparing site closure relative to the property remaining an undeveloped parking area. The County indicated that should the soil vapor data input into

the vapor intrusion model indicate an unacceptable risk, then additional mitigation measures or removal actions would be required. Formal closure of the site is pending.

Offsite Mobil Service Station (Located to the south of Edinger Avenue)

In September 1987 a routine tank integrity test indicated that a waste oil tank failed. Three gasoline and one waste oil tank were removed September 29, 1987. Analytical tests detected up to 2,650 ppm gasoline in soil. Approximately 826 cubic yards of soil was excavated and removed. Eight groundwater monitoring wells were installed in August 1991. Free product was identified in the monitoring wells. This offsite facility is currently undergoing a remedial cleanup utilizing a pump and treat (carbon) system. Holguin, Fahan & Associates prepared a Remedial Progress Report, dated November 2001, which indicated approximately 8.2 million gallons of groundwater has been pumped and treated at this facility since May 1992. The treated groundwater is discharged to a storm drain. Quarterly groundwater monitoring is ongoing at this facility.

HYDROGEOLOGY

The subject property is located within the lower Santa Ana River drainage of the Orange County Coastal Plain. The site is underlain by silts, sands, and clay derived from the Santa Ana River. The Santa Ana River is located approximately three miles to the southeast of the subject property. Subsurface site assessments encountered first water beneath the subject property at approximately eight feet bgs. The principal aquifer beneath the property is the Talbert aquifer which is approximately seventy-five feet below ground surface.

Historic groundwater level data reveal a relatively flat groundwater gradient with a variable flow direction. The reported direction of groundwater flow at the former Montgomery Ward Automotive Center and former Firestone facility was generally towards to the south-southwest. Dames and Moore reported the groundwater gradient at the Broadway Store and former Goodyear Tire Store to be northwesterly in June 1994. The groundwater gradient at the former Chevron service station is reportedly towards the west/southwest. The variable groundwater gradient may be the result of historic groundwater extraction and treatment work at the Montgomery Ward Auto Center, Firestone, and Chevron facilities. Groundwater is not currently extracted from the subject property or adjacent property.

A Mobil/Exxon service station is located offsite on the southwest corner of the Beach Boulevard and Edinger Avenue intersection. The groundwater gradient at the offsite Mobil station has been reported towards the west, north and south. This offsite facility is currently extracting groundwater as part of a

remedial cleanup. Up 8.2 million gallons has been pumped through the treatment system since May 1992.

The Orange County Water District, Water Quality Department maintains well information for Orange County. The nearest active production well to the subject property is well no. HB-10 located approximately 2,000 feet southeast of the subject property. The well was last measured on November 30, 2001. The depth to static groundwater at that time was 85.0 feet bgs. The ground surface elevation was measured at 23.45 feet.

Law/Crandall prepared a *Report of Geotechnical Investigation, Proposed Reconstruction of the Huntington Beach Mall, 7777 Edinger Avenue, Huntington Beach, California*, dated August 20, 1997. No additional borings were drilled due to the extensive previous field explorations conducted at the subject property by other geotechnical consultants. The previous field explorations encountered fill three feet thick, in areas of the existing parking lot. The fill consisted of silt and organic material. The natural soils beneath the site consist of clay, silt, silty sand, and sand with gravel. Significant amounts of peat deposits were encountered in the borings at depths of 20 to 30. Clay and silty soils were identified at 45 to 50 feet bgs. Groundwater was encountered at approximately five to seven feet bgs. The *Report of Geotechnical Investigation* also included a *Corrosion Study* prepared by M.J. Schiff & Associates, Inc, dated July 29, 1997. The site was classified as severely corrosive to ferrous metals, aggressive to copper, and deleterious to concrete. Driven friction piles extending to depths of approximately 45 to 50 feet bgs were recommended to support the proposed buildings.

During July 2005, California Environmental excavated nine borings to depths of 15 feet beneath the automotive repair portion of the facility. The borings encountered natural alluvial deposits consisting of silty clays through fine silty sands. These materials typically were interbedded and contained zones of high organic debris content.

SITE UTILIZATION HISTORY

HISTORICAL CITY DIRECTORIES

EDR Company was contacted to research historical city directories for the subject property. The city directory was reviewed at approximately five year intervals spanning from 1971-2004. A summary of city directories reviewed for the subject property is included in **TABLE I**. The report is attached in **APPENDIX IV**.

TABLE I
Historical City Directories

Year	Uses	Source
1971-1985	Address not listed in research source	Haines Criss-Cross Directory
1990-2004	Office building	Haines Criss-Cross Directory

BUILDING AND GRADING PERMIT RESEARCH

Building permit information was obtained from the ATC Environmental, Inc. *Phase I Environmental Site Assessment, Huntington Beach Mall. 7777 Edinger Avenue, Huntington Beach, California*, dated October 17, 1997. The Huntington Beach Mall property was developed with a Broadway Department store in 1965. The rest of the main mall structure was developed in 1965 through 1969. Broadway Department store constructed an automotive service center (recently Goodyear Center) in 1966. Montgomery Ward constructed an automotive service center in 1966. The earliest Chevron service

station permit found was for an alteration in 1972/1973. The Chevron service station closed in 1995. The former Chevron site is currently developed with a Macaroni Grill Restaurant. In 1966, portions of the strip mall were constructed. The dry cleaner facility was issued a Certificate of Occupancy in 1971. A change in ownership for the dry cleaners was indicated in 1980. The dry cleaning facility closed in 1993. Numerous tenant improvement permits were issued following 1966.

UNDERGROUND STORAGE TANK PERMIT RESEARCH

The Orange County Health Care Agency and the Regional Water Quality Control Board were visited by our personnel to research their files for underground storage tank (UST) permits and industrial waste records for the subject property. In addition, the Ezralow Company provided copies of previous environmental reports prepared by other environmental consultants.

Installation permits for the underground tanks historically present on the property were not found. Removal permit documentation was on file with the Orange County Health Care Agency. These removal permits indicate that seven underground storage tanks (see **PLOT PLAN DETAIL**) were historically present on the subject property. Two of the tanks were 10,000-gallons in capacity and contained gasoline. These tanks were located near the southwest corner of the automotive repair facility. Those tanks were removed during August 1986.

A 550-gallon waste oil tank was located to the east of the automotive repair facility. That tank was removed during September 1986. Four additional tanks were removed during 1991. Two of the tanks were 500-gallons in capacity and two were 1,000-gallons in capacity. The tanks reportedly contained fresh motor oil. The tanks were located to the west of the automotive center and north of the former fuel

tank area. These tanks are alternatively referred to as either containing fresh oil or waste oil. The tanks were found to be placed upon a concrete "dead man" and several of the tanks were corroded on the top and sides. Sampling directly below was not possible due to the slab. Samples were obtained at the edges and slightly beneath the concrete slab. The three soil closure samples were tested for total recoverable petroleum hydrocarbons using 418.1. TPH was not detected. Since TPH was not detected, additional analyses for volatile organic compounds was not required.

High levels of gasoline petroleum hydrocarbons were found during tank closure sampling for the removed 10,000-gallon fuel tanks. Those detections precipitated the approximately 20 year assessment and remedial clean-up activities at the site. Two samples were obtained during closure of the waste oil tank on the east side of the building. Those samples were tested for TPH and VOC's using EPA Methods 418.1 and 8020. No detectable VOC's were found. Low levels of TPH (14-23 mg/Kg) were detected.

All seven of these underground tanks were listed on the Case Closure Form submitted and approved by the Orange County Health Care Agency. It appears all known underground tanks have been removed from the property. Several small hydraulic oil tanks are likely to be found during removal of the in ground hydraulic lifts located on the northern portion of the auto repair facility.

SCAQMD FILE REVIEW

Inquiry letters were sent to the South Coast Air Quality Management District (SCAQMD) for any information they may have regarding soil, water or air contamination at the subject property. No additional files for the site were found by the SCAQMD.

HISTORICAL AERIAL PHOTOGRAPH RESEARCH

Historical aerial photographs were obtained from EDR to augment those previously reviewed as part of ATC Environmental, Inc. *Phase I Environmental Site Assessment, Huntington Beach Mall. 7777 Edinger Avenue, Huntington Beach, California*, dated October 17, 1997. The photographs are part of the aerial photograph collections maintained by EDR and RUPP Aerial Photography. The photographs are summarized below in **TABLE II**.

TABLE II
Historical Aerial Photographs

Date	Description
1938	Subject and adjacent properties are utilized for agricultural purposes, specifically row crops.
1953	Subject and adjacent properties remain as previously described in the 1938 aerial photograph.
1963	Subject and adjacent properties remain as previously described in the 1953 aerial photograph. The adjacent property to the north shows evidence of recent grading activities for the future San Diego (405) Freeway. Adjacent properties to the south consist of a residence and agricultural property.
1968	Subject site developed with retail building and auto repair facility. Adjacent mall property developed.
1972	Subject property is developed per 1968 photograph. The building in the northeastern portion of the property is no longer present.
1988	Subject and adjacent properties essentially remain as previously described in the 1972 aerial photograph. The adjacent property to the north consists of a motel complex and commercial property.
1992	Subject and adjacent properties remain as previously described in the 1988 aerial photograph.
2002	Subject property developed with auto center on south and retail store. Parking lots surround structures with commercial development on adjacent properties.

HISTORICAL FIRE INSURANCE MAPS

The EDR Company was contacted to review historical fire insurance maps for the subject property. There is no Sanborn historical fire insurance map coverage for the subject property. The EDR response letter is included in **APPENDIX II** of this report.

HISTORICAL TOPOGRAPHIC MAPS

Historical topographic maps were reviewed as part of scope of work for this environmental site assessment. The historical topographic are summarized below in **TABLE III**.

TABLE III
Historical Topographic Maps

Date	Quadrangle	Description
1901	Santa Ana	Subject property is undeveloped. A railroad line is located to the west. Present-day Edinger Avenue is located to the south with undeveloped land to the north and west.
1965	Newport Beach	Huntington Beach Mall property is developed with the present-day Broadway building. High-tension power lines are located along the northern portion of the property. The property is bound to the north by vacant land; a drainage channel and railroad line to the west; Edinger Avenue to the south; and Beach Boulevard to the east.
1972	Newport Beach	Subject property is developed with the present-day mall, strip mall, Montgomery Ward Auto Center, Firestone, Bank of America, and Goodyear structures. High-tension power lines are located along the northern portion of the property. The property is bound to the north by vacant land; a drainage channel and railroad line to the west; Edinger Avenue to the south; and Beach Boulevard to the east.

NEARBY CONTAMINATED SITES

LANDFILLS

The Solid Waste Information Systems (SWF/LF-SWIS) and the Waste Management Unit Database (WMUD/SWAT) EDR database reports were reviewed to identify landfills and transfer stations located within a 2,000-foot radius of the subject property. The EDR database report indicates that there are no landfills or transfer stations located within a 2,000-foot radius of the subject property. There are no active hazardous waste landfills located within Orange County.

OIL FIELD MAPS

Oil field maps published by the State of California, Division of Oil, Gas and Geothermal Resources (DOGGR) were researched to determine if oil production occurred on or near the subject property. The property is located approximately 9,000 feet north of the Huntington Beach Oil Field. Wildcat map no. W1-6 indicates that two plugged and abandoned dry holes are located about 2,000 feet east of the property. Westminister 1, owned by Hillman Long, Inc., was a prospect well drilled in February 1936. The total depth of the well was 8,705 feet bgs. No important showings of oil or gas were encountered in the drilling of the well. The dryhole was abandoned in August 1936. The second well "Miles" is owned by W.G. Kreiger. This dryhole is located just west of Hillman Long "Westminister 1". The dryhole was drilled in 1945 to a total depth of 2,981 feet bgs. According to Ms. Cordelia Jenkins with the DOGGR, there are no records on file for the W.G. Kreiger "Miles" dryhole.

STANDARD ENVIRONMENTAL RECORD SOURCES

In addition to the above records, agency database lists were reviewed for known or suspected contaminated sites and for sites which store, generate or use hazardous materials near the subject property. The Montgomery Wards is listed as a facility that had a release of petroleum hydrocarbons on the LUST database. Several tenants of the Huntington Beach Mall property are also listed as facilities that generate and/or store hazardous materials on the RCRIS–SQG, FINDS, LUST, HAZNET, CORTESE, CaFID UST, Historical UST, CaSLIC, and CaWDS standard environmental government sources researched in this report. Huntington Beach Mall facilities are also listed on databases that indicate a fuel or solvent releases has occurred onsite. The **PREVIOUS WORK** section of this report details the subsurface site assessment activities that occurred on the subject property. A list of selected environmental risk sites found to exist within one-quarter mile radius of the property are listed in **TABLE IV**.

TABLE IV
Standard Environmental Record Sources

Name	Address	Distance from Subject Property	Source(s)
Montgomery Wards	7777 Edinger Avenue	Subject Property	LUST
JC Penny Facility #1069 Firestone	7777 Edinger Avenue Unit E1 SE	300 ft. E	RCRA-SQG FINDS HAZNET LUST
Levitz Furniture	7444 Edinger Avenue	500 ft. W	LUST Cortese
Huntington Valley Press Inc.	7226 Lorge Cir.	1,005 ft. SW	HAZNET
Ano D Art	7436 Lorge Cir.	1,005 SW	RCRA-SQG FINDS HAZNET CERC-NFRAP HIST UST
Revelation Records	7456 Lorge Cir.	1,015 ft. SW	HAZNET
Freeway Industrial Park	16131 Gothard St. STE N	1,040 ft. SW	HAZNET

TABLE IV
Standard Environmental Record Sources
(continued)

Name	Address	Distance from Subject Property	Source(s)
Sentry Metals	16072 Gothard Street	1,075 ft. WSW	SLIC HAZNET
Mutual Metal Stamping & MFG Inc.	16072 Gothard	1,075 ft. WSW	RCRA-SQG FINDS
Verizon California Inc HB COC	7280 Edinger Avenue	1,100 ft. W	UST
GTE California Inc.	7280 Edinger Blvd.	1,100 ft. W	HAZNET LUST Cortese
Production Plating	16091 Gothard Street	1,120 ft. WSW	RCRA-SQG FINDS HAZNET LUST Cortese HIST UST EMI
Huntington Highlander APTS	16162 Sher Lane No. 13	1,140 ft. SE	HAZNET
Five Points Paint and Body	16131 Gothard Street	1,230 ft. SW	HAZNET
Contemporary Auto Machine	16131 Gothard St., Unit D	1,230 ft. SW	HAZNET
Quality Gas #5532	7252 Edinger Avenue	1,290 ft. W	LUST
Haagen Properties Mgmt	7252 Edinger Avenue	1,290 ft. W	HAZNET
Carters Gear Box Shop	16182 Gothard Unit J	1,290 ft. SW	RCRA-SQG HAZNET
Huntington Beach Water De	16192 Sher	1,335 ft. SE	LUST Cortese
Medical Imaging Center of Huntington Beach	7677 Center Avenue Suite 212	1,360 ft. NNW	RCRA-SQG FINDS
Watts Management Company	7409 Edinger Avenue	1,615 ft. W	HAZNET
--	7402 Edinger Avenue	1,630 ft. W	CHMIRS
Unocal #5826	7361 Edinger Avenue	1,670 ft. W	LUST Cortese
EZ Lube	73361 Edinger Avenue	1,670 ft. W	HAZNET
Huntington Beach Mall	7777 Edinger (Cleaners)	1,800 ft. E	SLIC
Chevron #9-8655	7777 Edinger Avenue	2,000 ft. E	LUST Cortese CA FID UST EMI
The Cleaning Factory	7644 Edinger Avenue	2,500 ft. E	SLIC RCRA-SQG FINDS HAZNET Orange Co. Industrial Site EMI

Note: A search of public information databases may omit some nearby contaminated sites due to missing or inaccurate information in the public record.

The orphan site summary in the EDR database report lists small quantity generators (i.e. auto repair and medical offices) of hazardous waste. The properties are located greater than 500 feet from the subject site and are not expected to have an impact on the subject property.

SUBSURFACE ASSESSMENT

Subsurface assessment in the form of soil and soil vapor sampling was conducted at the property. This work was done in order assess areas not previously evaluated during the earlier remedial clean-up process. Redevelopment of the Montgomery Wards parcel is contemplated. It was desired to further quantity the extent of subsurface impacts which may be encountered during future grading activities.

SOIL VAPOR SURVEY

A soil vapor survey was conducted on the subject property during July 18, 2005 by HP Mobile Geochemistry under the direction of California Environmental. Prior to initiating the vapor testing, a lithology corehole was excavated onsite. A sandy permeable horizon was identified at a depth of about 5-7 feet below the ground surface. Therefore, the target depth for the vapor survey was 6 feet below the ground surface. Six soil vapor probes were placed to depths of 6 feet as shown on the attached **PLOT PLAN DETAIL**. A hydraulic push rig was utilized for placement of the soil vapor probe. Following the vapor probe placement, the probe was purged and samples were transferred to the onsite state certified mobile laboratory for analysis (see **APPENDIX V, Vapor Sampling Protocols**). The vapor samples were analyzed for volatile organic compounds using EPA Method 8260B and for fixed gases, methane, oxygen, and carbon dioxide. Vapor probes were placed near the former waste oil tank, adjacent to the fuel tanks, near the former pump island, and in background locations.

Trace levels of toluene (1-1. 2 µg/L) were detected in probes SV5 and SV7. The remaining five soil vapor samples were non detect for all volatile organic compounds. Two vapor probes, SV1 and SV2, contained methane levels which ranged from 1,500 – 1,960 ppmV, respectively. Depressed levels of oxygen (4.3-4.4%), and elevated levels of CO_2 (15-16%) were also found in these locations. These levels were probably due to anaerobic biogenic decay of petroleum hydrocarbons found in soil beneath the northern portion of the automotive repair facility. The vapor data is summarized on **TABLE V**. The laboratory report is attached in **APPENDIX V**.

TABLE V

Laboratory Analysis of Soil Vapor – Montgomery Wards

Sample I.D.	EPA Method 8260 µg/L						Fixed Gases as % or ppmV		
	B	T	E	X	TCE	PCE	Methane ppmV	O_2%	CO_2%
SV1 @ 6 ft.	ND	ND	ND	ND	ND	ND	1500	4.4	16
SV2 @ 6 ft.	ND	ND	ND	ND	ND	ND	1960	4.3	15
SV3 @ 6 ft.	ND	ND	ND	ND	ND	ND	11	13	6
SV4 @ 6 ft.	ND	1.2	ND	ND	ND	ND	87	5	14
SV5 @ 6 ft.	ND	ND	ND	ND	ND	ND	ND	14	16
SV6 @ 6 ft.	ND	ND	ND	ND	ND	ND	ND	23	1.6
SV7 @ 6 ft.	ND	1.0	ND	ND	ND	ND	ND	9.4	18

SOIL SAMPLING

A hydraulic push rig and hand auger were utilized to obtain soil samples from beneath the site. Nine borings and two testholes were excavated, see **PLOT PLAN DETAIL**. The hydraulic push rig excavated borings to depths of 15 feet in the area of the former waste oil and fresh oil tanks and on the peripheral area identified as containing residual gasoline petroleum hydrocarbons due to the release from the gasoline fuel storage tanks. Hydraulic push borings were also excavated adjacent to the hydraulic lifts on the northern portion of the site. Two hand auger testholes were also excavated. One hand auger testhole was excavated beneath the battery storage room in an area of degraded concrete floor. A second testhole was excavated in the median of Edinger Avenue, adjacent to offsite Monitoring

Well 5. Soil samples were retained in acetate liners or brass tubes. The samples were tested per EPA Methods 8015, 8260B/5035, and Series 6000 for metals.

Oil range petroleum hydrocarbons were found in several of the boreholes excavated beneath the northern portion of the auto center. The maximum concentration of oil detected was 2,570 mg/Kg as found in CEB9 at 5 feet. Oil was also detected to depths of 15 feet in the area of the hydraulic lifts. Low levels of chlorinated solvents, PCE, 1,1-DCA, and cis-1,2-DCE were detected in soil beneath the northwest portion of the automotive service center. Tests for heavy metals were also conducted on samples obtained beneath the battery room. The metals were found to be within natural background levels. The soil data is summarized on **TABLE VI**. The laboratory test report is attached in **APPENDIX V**.

TABLE VI

Laboratory Analysis of Soil Samples – Montgomery Wards

Sample ID	EPA Method 8015FC mg/Kg				EPA Method 8260 µg/Kg									
	C4-C12	C13-C22	C23-C32	Total TPH	B	T	E	X	PCE	Cis 1,2-DCE	1,1-DCA	Acetone	Oxygenates	Others
CESB1@2 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB1@5 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**40**	ND	ND
CESB1@10 ft.	ND	ND	**10**	**10**	ND	ND	ND	ND	ND	ND	ND	**38**	ND	ND
CESB1@15 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**48**	ND	ND
CESB2@2 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB2@5 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB2@10 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**58**	ND	ND
CESB2@15 ft.	ND	ND	**19**	ND	ND	ND	ND	ND	ND	ND	ND	**76**	ND	ND
CESB3 @2 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB3 @ 5 ft.	ND	ND	ND	ND	ND	ND	ND	**7.3**	ND	ND	ND	**190**	ND	**2-butanone (37)** **n-propyl benzene (19)** **1,2,4-TMB (90)**
CESB3 @ 10 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB3 @ 15 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB4 @2 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**41**	ND	ND
CESB 4 @5 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**31**	ND	ND
CESB4 @10 ft.	ND	**11**	**26**	**37**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB4 @15 ft.	ND	ND	ND	**13**	ND	ND	ND	ND	ND	ND	ND	**36**	ND	ND
CESB5 @ 2 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**Naphthalene (250)**
CESB5 @ 5 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB5 @ 10 ft.	**13**	**996**	**843**	**1,852**	ND	ND	ND	ND	ND	ND	ND	**34**	ND	ND
CESB5 @ 15 ft.	**60**	**2180**	**483**	**2,758**	ND	ND	ND	ND	ND	ND	ND	**28**	ND	**n-butylbenzene (6.9)** **sec-butylbenzene (5.7)**
CESB6 @ 2 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB6 @ 5 ft.	ND	ND	ND	ND	ND	ND	ND	ND	**16**	ND	ND	ND	ND	ND
CESB6 @ 10 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB6 @ 15 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**40**	ND	ND
CESB8 @ 2 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB8 @ 5 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB8 @ 10 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB8 @ 15 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**25**	ND	ND
CESB8 @ 18 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	**32**	**5.3**	**100**	ND	ND
CESB9 @ 5 ft.	ND	**110**	**2,460**	**2,570**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CESB9 @ 8 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**82**	ND	ND
CESB9 @ 12 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**32**	ND	ND

TABLE VI

Laboratory Analysis of Soil Samples –Montgomery Wards

(continued)

Sample ID	EPA Method 8015FC mg/Kg				EPA Method 8260 µg/Kg									
	C4-C12	C13-C22	C23-C32	Total TPH	B	T	E	X	PCE	Cis 1,2-DCE	1,1-DCA	Acetone	Oxygenates	Others
CEHA1 @ 6 in.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CEHA1 @ 2 ft.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CEHA1 @ 3 ft. 72105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CEHA1 @ 5 ft. 72105	**<1**	**3.9**	**6.1**	**10**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CEHA1 @ 8 ft. 72105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
CEHA1 @ 10 ft. 72105	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

B – Benzene; T – Toluene; E – Ethylbenzene; X – Xylene; TCE – Trichloroethene; PCE – Tetrachlorethene; TCA - Trichchloroethane
ND – Non Detect

GENERAL FINDINGS

During the research phase of this study, the following information was obtained:

- Building permit information indicates that the mall property was developed with a Broadway Department store and strip mall in 1965. The main mall structure was developed in 1965 through 1969. The Broadway Department store constructed an automotive service center (most recent Goodyear Center) in 1966. Montgomery Ward constructed an automotive service center in 1966.

- Historical aerial photograph research indicates that the property was developed with row crops in 1938, 1953 and 1963. A retail shopping center occupied the property from 1968 through 2002.

- Historical topographic research indicates that the subject property was undeveloped in 1901. The property was developed with the present-day Broadway building in 1965. The property was occupied by the present-day mall, strip mall, Montgomery Wards Auto Center, Firestone, Bank of America, Goodyear structures in 1972.

- The OCHCA file review found inspection notices and laboratory data for removal of the seven underground tanks from the Montgomery Wards Auto Service Center.

- There are no landfills or transfer stations located within a 2,000-foot radius of the subject property.

- Two plugged and abandoned dry holes are located offsite, 2000 feet to the east of the property.

- The regional direction of groundwater flow is towards the south-southwest. Variable groundwater flow directions were reported on nearby properties.

- The depth to groundwater at the site has historically ranged from 6-10 feet bgs.

- In 1986 a release from an underground fuel storage tank was reported beneath the Montgomery Wards Automotive facility. Assessment and clean-up of that release occurred from the late 1980's through 2004. On December 13, 2004, the lead enforcement agency, the Orange County Health Care Agency, issued a Remedial Action Completion Certificate for the property. Residual levels of gasoline hydrocarbons remain in soil and groundwater beneath the area of the former release.

During the site reconnaissance, the following observations were made:

- The subject property (about 13.5 acres) is located on a rectangular shaped parcel of land within the western portion of the Huntington Beach Mall, which encompasses approximately 53 acres. The property is developed an 18,600 square foot auto repair facility and a 92,600 square foot two-story retail building. Both structures are unoccupied.

- Drainage from the site is by sheetflow towards the south into city streets.

- Eleven hydraulic hoists are located within the vacant Montgomery Wards Automotive facility. The hydraulic oil reservoirs are located both above ground within the basement of the automotive facility and in-ground.

- A sump was observed within the basement of the Montgomery Wards Automotive facility. The basement was flooded at the time of the site walkover.

- Disposal bins were observed onsite.

- High voltage transmission lines are located offsite on the northern portion of the mall property.

- A groundwater/soil remediation system associated with the former Montgomery Ward Automotive facility is located on the southwest portion of the property. The system is currently inactive.

- Groundwater monitoring and vapor extraction wells associated with subsurface site assessments and clean-up are present on the southern portion of the Montgomery Wards Automotive facility.

- No evidence of strong, pungent or noxious odors was noted on the subject property.

- No evidence of stressed vegetation was observed on the subject property.

- No evidence of pits, ponds, and/or lagoons was observed on the subject property.

- The northern portion of the property is currently utilized for storage of construction materials. The balance of this site is developed as an asphalt paved parking area.

CONCLUSIONS AND RECOMMENDATIONS

Historical site utilization research indicates the subject property was undeveloped in 1901. The site and surrounding area were cultivated with row crops form 1938 through the early 1960's. The initial mall development commenced during the mid-1960's. Montgomery Wards was constructed in about 1966. The subject property occupies about 13.5 acres on the western portion of the Huntington Beach complex. The entire mall complex covers approximately 53 acres and is currently undergoing major modifications and renovation.

The subject property is developed with two structures. A former automotive service facility is located on the southwest corner of the property and occupies about 18,600 square feet. The southern 2/3 of that structure consists of a one-story structure over a basement level. During the site reconnaisance the basement level contained several inches of water. That structure is currently unoccupied. The Montgomery Ward Department store building occupies about 92,600 square feet on the central eastern portion of the site. That department store building is currently unoccupied. Both structures are slated for demolition as part of redevelopment of the parcel.

The subject property is a leaky historic underground storage tank site. A fuel release occurred from an underground storage tank some time prior to 1986 when the tanks were removed. Assessment and remedial clean-up work occurred through the late 1980's into the early 2000's. The clean-up work included excavation and treatment of contaminated soil, implementation of a groundwater pump and treat system, installation of soil vapor extraction and air sparging, and the placement of horizontal

extraction wells. This assessment work culminated during 2004 when a *Site Closure Report* was submitted to the lead enforcement agency, the Orange County Heath Care Agency. The Site Closure Report provided documentation that residual levels of gasoline hydrocarbons remain in both soil and groundwater beneath the site. Though high levels of residual fuel hydrocarbons remain (up to 14,500 mg/Kg of gasoline, 2 mg/Kg of benzene in soil, 9,500 mg/L TPH, and 2,000 µg/L benzene in groundwater), the site was recommended for low risk closure. The consultant for Montgomery Wards/Sears indicated that the remaining residual hydrocarbons in soil and groundwater would attenuate with time. The Orange County Health Care Agency issued a Remedial Action Completion Certificate, dated December 13, 2004 for the property. The Regional Water Quality Control Board – Santa Ana Region provided concurrence for the closure. The closure letter indicated "if redevelopment occurs and shallow contaminated soil is encountered, the soil must be handled to current regulatory requirements". All existing VES and groundwater wells, piping and treatment system components require proper abandonment.

Nearby contaminated sites were identified in the area of the subject property. These site include the Levitz Furniture facility located about 1,000 feet to the west, the former JC Penny facility, located about 300 feet to the east, the former Broadway Goodyear facility, located about 1,200 feet to the east, a former Chevron gas station, located about 2,000 feet to the east, and a former dry cleaners, located about 1,600 feet to the east-northeast of the property. Based upon review of the site assessment and clean-up data for these offsite properties, review of data for the release that had occurred on the subject property and the subsurface testing by California Environmental, no evidence was found to indicate that these offsite have or will impact the soil or groundwater beneath the subject site.

Subsurface testing was implemented as part of this assessment work. The subsurface testing included a shallow soil vapor survey and soil sampling. The soil vapor survey did not reveal evidence of elevated levels of VOC's in the area of the former gasoline release. Detectable levels of methane and depressed oxygen with elevated CO_2 was noted in vapor probes excavated on the northern portion of the property. This indicates probable anaerobic biodegradation of petroleum hydrocarbons detected in that area.

Soil sampling was also initiated. Petroleum hydrocarbons were detected in soil beneath several of the hydraulic lifts and in soil in the area of the removed fresh oil tanks. Low levels of chlorinated solvents including PCE and degradation compounds cis 1,2-DCE, and 1,1-DCA were also found in shallow soil beneath the northern portion of the automotive center. Chlorinated solvent hydrocarbons were detected in groundwater during the early assessment work performed onsite as reported by TRC Consultants in 1987. Chlorinated solvents were not detected in groundwater during the final round of groundwater sampling by ENSR (October 2003) which was submitted to Orange County Health Care as part of the closure package. These data would appear to indicate that residual chlorinated solvent impacts in groundwater were probably cometabolized or remediated during the historic soil and groundwater treatment work performed at the property. Wide spread solvent contamination beneath Sears Automotive Center is not indicated by the vapor survey or the soil sampling. It is probable that chlorinated solvents were used onsite as degreasers and that some of this material has migrated into the underlying soil. The levels detected are considered "de minimus" levels that do not require subsequent notification to the lead enforcement agency.

Areas of petroleum hydrocarbon releases, probably related to hydraulic lifts, were identified on the northern portion of the automotive repair center. These releases appear sporadic in nature and extend to depths of over 15 feet. The hydraulic oil does not contain a volatile component and is not particularly soluble in groundwater. The maximum level of hydraulic oils detected in soil in the northern portion of the site are well below the maximum levels of residual TPH gasoline as found on the southern portion of the site. Those higher levels were deemed appropriate to remain in place by the regulatory agency. Therefore, no additional notification or clean-up of these impacts are required at this time.

The concrete flooring within the former battery room is heavily degraded due to battery acid etching. A testhole excavated beneath the most severely degraded concrete did not reveal significant levels of heavy metals, particularly lead and/or chrome.

One hand auger testhole was excavated beneath the median of Edinger Avenue, south of the release which occurred on the former Montgomery Wards Automotive property. Soil samples were obtained at depths of 3, 5, 8 and 10 feet beneath the ground surface. No volatile organic constituents were detected. Trace levels of TPH (about 10 mg/Kg) was detected in the sample from the depth of 5 feet. This testhole was excavated in order to evaluate for lateral spreading offsite from the release which occurred beneath the subject property. The testing appears to indicate that significant lateral spreading in soil beneath Edinger Avenue, extending to offsite properties to the south has not occurred. Impacted groundwater has migrated offsite.

Demolition of onsite structures and future grading work is contemplated. Significant quantities of asbestos containing building materials were identified primarily in the two story department store building. Additional asbestos evaluation should be performed prior to demolition of the structures to verify quantities and to investigate areas not accessible during the two previous asbestos scoping surveys.

Future grading work on the southwestern portion of the property will encounter petroleum hydrocarbon impacted soils. Complete removal of the impacted soils would require excavations to depths of 15 feet. Previous assessment work documents most of the residual impacts are present beneath the depths at 5-15 feet below the ground surface. An earlier estimate (July) provided by California Environmental suggests on the order of $1.2 million would be required to excavate, remove, and dispose/treat the petroleum impacted soils, if required. If redevelopment over the footprint of the residual contamination or immediate adjacent to the contamination is contemplated, then removal of the residual petroleum hydrocarbon contamination may be required by Orange County Health Care. Such development would also trigger the need to complete a risk assessment with soil vapor data as the probable input parameter to evaluate future indoor air quality.

Various containers of waste oil, automotive fluids, and hydraulic oils will be generated during demolition activities at the automotive center. Petroleum hydrocarbon impacted soil will be found during demolition of the auto center and removal of some of the hydraulic lifts. Petroleum impacted soil should not be reused within controlled compacted fills unless approved by the regulatory authority. Areas of additional hydrocarbon impacts in shallow soil beneath the northern portion of the facility

would probably be identified following slab removal and removal of the hoists. These areas should be mitigated as appropriate under the inspection of a qualified environmental consultant.

California Environmental has performed a Preliminary Environmental Site Assessment – Phase I Update and Subsurface Testing in conformance with the scope and limitations of ASTM 1527-00 for the property located at 7777 Edinger Avenue (also known as the Montgomery Wards/Sears Parcel), Huntington Beach, California. This assessment has revealed evidence of historical recognized environmental conditions in connection with the subject property. These historical recognized environmental conditions are discussed above. The residual gasoline fuel hydrocarbon impacts in both soil and groundwater beneath the site have been issued a Remedial Action Completion Certificate by the lead enforcement agency, the Orange County Health Care Agency. The lead enforcement agency indicates "that if redevelopment occurs and shallow contaminated soil is encountered, the soil must be handled according to current regulatory requirements". California Environmental has identified additional low level solvent and TPH impacts on the northern portion of the property. These impacts are considered "de minimus", not requiring remedial clean-up or reporting to the lead enforcement agency. No additional recognized environmental conditions were ascertained in connection with the property. Expanded site assessment research or additional subsurface testing is not recommended at this time.

This report is subject to the following **NOTICE**:

NOTICE

All properties are subject to some element of environmental risk and the risk cannot be eliminated. Industrial and commercial properties developed prior to modern environmental laws are especially risk prone to environmental hazards which include, but are not limited to, wastes which may be toxic, ignitable, corrosive or reactive. The potential for these environmental hazards to impact the use of the property can be reduced by the identification and mitigation of the hazards prior to development or redevelopment of the property. Due to the difficulty in locating underground wastes, in some cases it is not always possible to ascertain that hazardous wastes are present on the property prior to development.

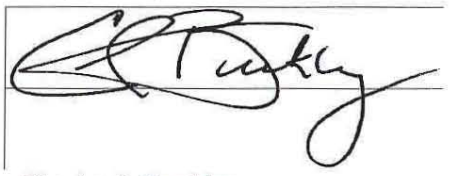
A Phase I environmental site assessment does not utilize subsurface exploration to check for the presence of hazardous wastes on the property. The experience of the assessor, along with the research of available reports, aerial photographs and land use records are used to evaluate the potential for hazardous wastes to occur on the site. Based on the information gained from the audit, subsurface exploration may be recommended to check for the presence of hazardous wastes. Preexisting environmental problems such as the presence of hazardous wastes in the soil or groundwater, can be concealed by grading activities and site improvements. If such wastes are present these wastes cannot be observed by the auditor.

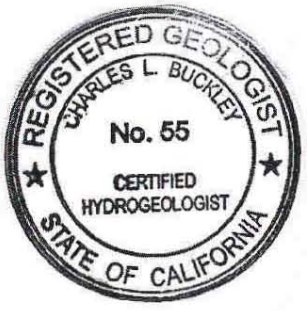
The subsurface conditions described herein have been ascertained from excavations on the site as indicated, and should in no way be construed to reflect variations which may occur between or beyond these excavations. The chemical laboratory testing described herein was performed by a state certified testing laboratory. The state certified testing laboratory assumes responsibility for the testing procedures used in their analysis.

This report was prepared with the skill and competence as commonly used by environmental professionals in this area. No warranty, expressed or implied, of any kind is made or intended in connection with this report, or by the fact you are being furnished this report, or by any other oral or written statement.

Should you have any questions or desire any additional information, please contact the undersigned.

Respectfully Submitted,





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38. Harding ESE, 2nd Quarter Groundwater Monitoring Report 2000, August 10, 2000.
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45. Harding HLA, Near Surface Soil Sampling Huntington Beach Mall Goodyear, April 18, 1997.
46. Hillman Environmental Group, Phase II Soil Investigation Huntington Beach Mall Parking Lot Adjacent to Huntington Beach Mall (northside), May 1, 2001.
47. Hillmann Environmental Group, LLC, Asbestos Abatement Specifications Report, May 2, 2001.
48. Hillmann Environmental Group, LLC, Asbestos Survey Report, May 13, 2001.
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55. Holguin, Fahan & Associates, Inc., 2nd Quarter Groundwater Monitoring Report, Exxon/Mobil Oil Corporation, 16001 Beach Boulevard, Huntington Beach, June 20, 2001.
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65. Holguin, Fahan & Associates, Inc., Second Quarter 2001 Ground Water Monitoring and Progress Report, Exxon/Mobil Oil Corporation, 16001 Beach Boulevard, Huntington Beach June 30, 2001.
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88. TRC Alton Geoscience, Second Quarter 1999 Status Report, July 31, 1999.
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90. TRC Environmental Consultants, Inc., Phase I Site Assessment, March 9, 1987.
91. TRC Environmental Consultants, Inc., Phase II Assessment and Proposed Phase III Investigations Work Plan, October 26, 1987.
92. TRC Environmental Consultants, Inc., Phase III Investigation, July 29, 1988.
93. Wayne Perry, Inc., Groundwater Monitoring Report, First Quarter 2000, Chevron Products Company, March 10, 2000.

CHARLES I. BUCKLEY, JR.
1161 Calle Suerte, Suite G
Camarillo, CA 93012

Bus. Tele: (805) 445-7117
E-Mail: cbuckley@calenviro.com

EDUCATION:

- **Masters** Work in Hydrogeology
  California State University, Los Angeles, 1980-1988
- **Bachelor of Science**, Geology (Engineering Geology)
  University of California, Los Angeles, 1978

REGISTRATIONS AND APPOINTMENTS:

- State of California, Dept. of Conservation, Former Member, State Mining and Geology Board (Appointed by Gov. Pete Wilson and State Senate confirmed to 4 year term, 1997-2001)
- State of California, Certified Hydrogeologist, No. 55
- State of California, Registered Geologist No. 4035
- State of California, Certified Engineering Geologist No. 1250
- State of California, Registered Environmental Assessor No. 837
- State of California, Registered Environmental Assessor II No. 20116

PROFESSIONAL EXPERIENCE:

Jan 88-Present CALIFORNIA ENVIRONMENTAL
CEO - Principal Hydrogeologist

Founded California Environmental in January of 1988. Clients include Fortune 500 Corporations, County Government, Municipal Agencies, Financial Institutions, Land Developers, and Consultants. Principal Investigator for groundwater supply and groundwater contamination investigations. Project leader for groundwater remediation at a State of California Superfund Site. Principal hydrogeologist for design and implementation of a groundwater monitoring network for an existing Sanitary Landfill. Lead investigator to delineate structure of a California Groundwater Basin; Pioneered use of a cost effective soil/gas vapor technique used to track groundwater plumes. Conducted over 2000 Phase I Environmental Investigations in California. These investigations included the use and interpretation of historic topographic maps, Sanborn Insurance Maps, aerial photography, and other historic data sources. Successfully completed remedial clean-up on 500+ sites in southern California; including impacts associated with fuels, PCBs, metals, asbestos and chlorinated solvents. Expert consultant for environmental impairment of soil and groundwater: Port of Los Angeles, L.A. County Counsel, L.A. City Recreation and Parks and private attorneys.

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PROFESSIONAL EXPERIENCE: (continued)

Mar 84-Dec 87 KOVACS-BYER AND ASSOCIATES
Manager Environmental Services Group

Spearheaded the development into the groundwater and environmental segments of consulting market. Ascended from project geologist status to manager of Environmental Services Group. Responsible for all aspects of project management including; organization and staffing, developing technical requirements needed to complete projects, client and agency liaison.

Provided technical leadership for groundwater testing including design and analysis of aquifer pump tests. Lead Geotechnical Investigator for remedial repair of complex landslide terrains. Prepared Seismic Analysis for critical facilities. Recommended specialized drainage systems for abatement of groundwater problems. Project Consultant for award winning projects on which severe geotechnical problems were overcome.

Mar 80-Mar 84 GEOTECHNICAL SERVICES GROUP; BUREAU OF ENGINEERING;
CITY OF LOS ANGELES
Assistant Engineering Geologist

Performed geologic mapping in hillside areas of the City of Los Angeles. Reviewed Geotechnical Reports submitted to the City of Los Angeles for private development. Directed landslide investigations. Prepared Expert Opinion documents regarding groundwater and geologic issues for the City Engineer and City Attorney. Conducted field monitoring of known landslides within the City of Los Angeles.

Aug 79-Mar 80 UNITED STATES GEOLOGICAL SURVEY
Field Assistant

Assisted in geological mapping for a uranium resource development project sponsored by the Department of Energy and the United States Geological Survey.

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CONTINUING EDUCATION:

- "Technical Guidance for Indoor Air Vapor Intrusion", Severn Trent Laboratory, San Pedro, CA, February 22, 2005.
- "Successful Brownfields Redevelopment: Achieving Clarity on Regulatory Requirements, Processes and Options", State of California EPA, DTSC, University of Southern California, November 18, 2004.
- "Low Cost Remediation Techniques", AGSE, San Francisco, CA 2002.
- "Remediation of MtBE", AGSE, Anaheim, CA 2002.
- "MTBE: Assessment, Remediation, and Public Policy", National Ground Water Association, June 6-7, 2002.
- Conference and Exposition, Petroleum Hydrocarbons and Organic Chemicals in Ground Water, Prevention, Detection, and Remediation, November 15-17, 2000.
- "Assessment and Management of MtBE Impacted Sites", San Francisco, January 1999.
- "Workshop on MtBE Water Issues", Los Angeles, June 1997.
- "Management Action Programs Seminar", Newport Beach, November 1996.
- "ACWA - Groundwater Workshop", Monterey, June 1995.
- "SeSoil Modeling Workshop" GSC, San Francisco, CA, October 1994
- "Groundwater Monitoring and Remediation", Short Course AEG, October 1992
- "Microbial Processes in Biodegradation", AGSE, Albuquerque NM, February, 1991
- "Introduction to Groundwater Geochemistry", National Water Well Association, San Francisco, CA, September, 1988.
- "Fate and Transport of Contaminants in the Subsurface", United States Environmental Protection Agency, San Francisco, CA, December, 1987.
- "How to Monitor and Sample the Vadose Zone"
  National Water Well Association, San Diego, CA, April, 1987.
- "Treatment Technology for Contaminated Groundwater" UCLA Fall, 1986.
- "Groundwater Contamination Detection, Monitoring and Cleanup", UCLA, April, 1986.
- "Introduction to Groundwater Modeling", National Water Well Association, Fullerton, CA 1985.

ORAL PRESENTATIONS AND SEMINARS:

- "Overview of Environmental Regulations, State and Federal Laws" Guest Lecturer, University of Southern California, 1991.
- "Environmental Risks and Underground Tank Leaks, Commercial Property Inspection"
  California Real Estate Inspectors Association, Santa Monica, CA., May, 1988.

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- "Modified Technique for Soil/Gas Surveys to Detect Groundwater Contamination". Association of Engineering Geologists, Southern California Section meeting. December, 1987.
- "Historic Aerial Photographic Evidence of Landslide Development, Potrero Canyon, CA." Association of Engineering Geologists Annual Meeting, San Francisco, CA., October, 1986.
- "Environmental Issues and Careers", Guest Lecturer, USC Department of Geology, Spring 1992.

PROFESSIONAL PAPERS:

- "Geology, Landslides and Slope Stabilization.
  Potrero Canyon Park, Pacific Palisades, CA."
  Association of Engineering Geologists Guidebook,
  June 20, 1987.
- "Red Rose Landslide Stabilization, 3358-3400
  Red Rose Drive, CA.
  with Hollingsworth, R.A.; Association of Engineering Geologists Guidebook.
  June 20, 1987.
- "Residential Development and Landsliding, Castellammare Mesa area, Los Angeles, CA."
  Association of Engineering Geologists Guidebook.
  June 2, 1984.

AFFILIATIONS:

Association of Engineering Geologists.
Association of Groundwater Scientists and Engineers.
California Groundwater Association.
Hazardous Waste Association of California.
Hydrology Section-American Geophysical Union.
National Water Well Association

CHRISTOPHER E. RUDE
1161 Calle Suerte, Suite G
Camarillo, CA 93012

Bus. Tele: (805) 445-7117

EDUCATION:

- **1992 Bachelor Degree** - Sonoma State University
  Environmental Studies and Planning - emphasis in Hazardous Materials Management

- **Associates Degree** - Moorpark Junior College

PROFESSIONAL EXPERIENCE:

1997 - Present CALIFORNIA ENVIRONMENTAL
Environmental Scientist

1992 - 1996 MSE ENVIRONMENTAL
Environmental Specialist

Performed approximately 1,200 Phase I Environmental Site Assessments on properties ranging from light industrial to large parcels of undeveloped land. Inspected developments for asbestos containing material, radon, and lead found in paint and/or drinking water.

Performed hazardous materials management operations for both small and large quantity generators. Services ranged form the decontamination/decommissioning of industrial buildings to providing segregation and packaging of various hazardous and extremely hazardous materials.

Performed numerous nation-wide Agricultural Chemical and Household Hazardous Waste Collection Events. Responsibilities included: preparing paperwork, pre-event profiling, hazcatting, segregation and manifesting of hazardous materials, and providing final documentation.

Responsible for logistical preparation and coordination associated with the State of Pennsylvania, Department of Agricultural's ChemSweep Program. The program included both individual farm pick-ups and agricultural chemical collections throughout the state. The program also included assisting approximately 1,500 farmers in disposing of 238 tons of outdated and banned pesticides.

CHRISTOPHER E. RUDE
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Camarillo, CA 93012

CONTINUED EDUCATION:

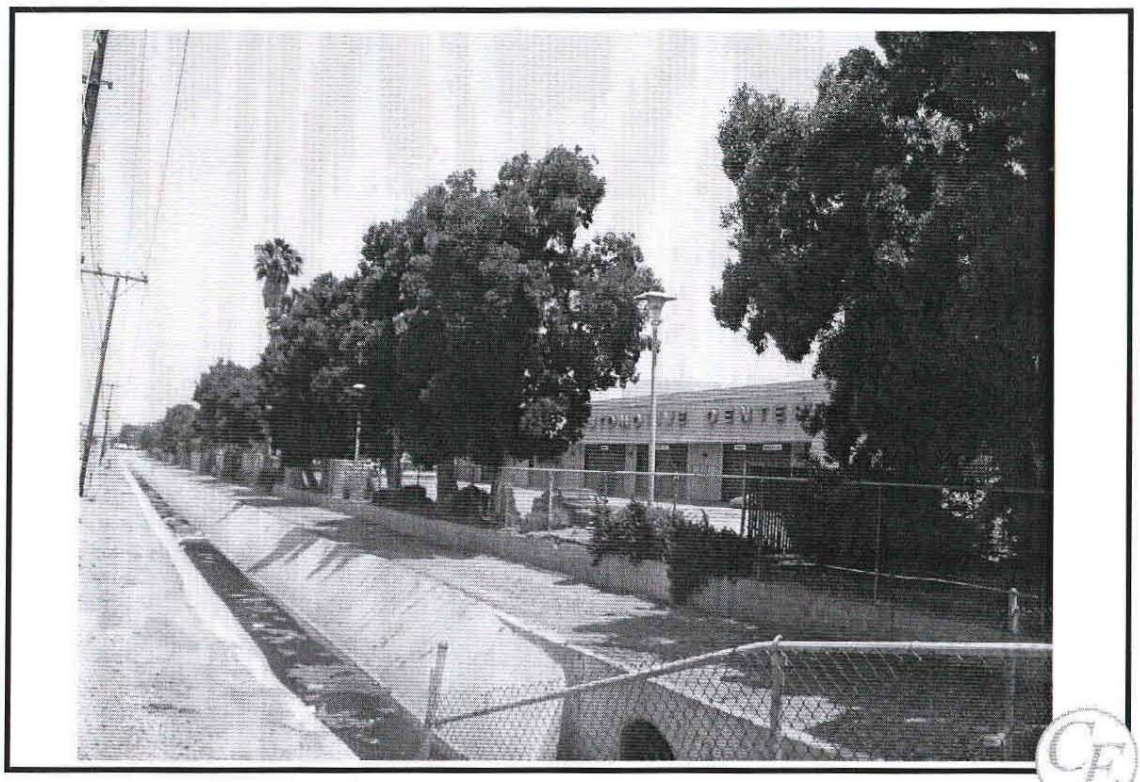
- Certificate of Hazardous Materials Management Program, University of California, Santa Barbara, Fall 1996-Present.

CERTIFICATION:

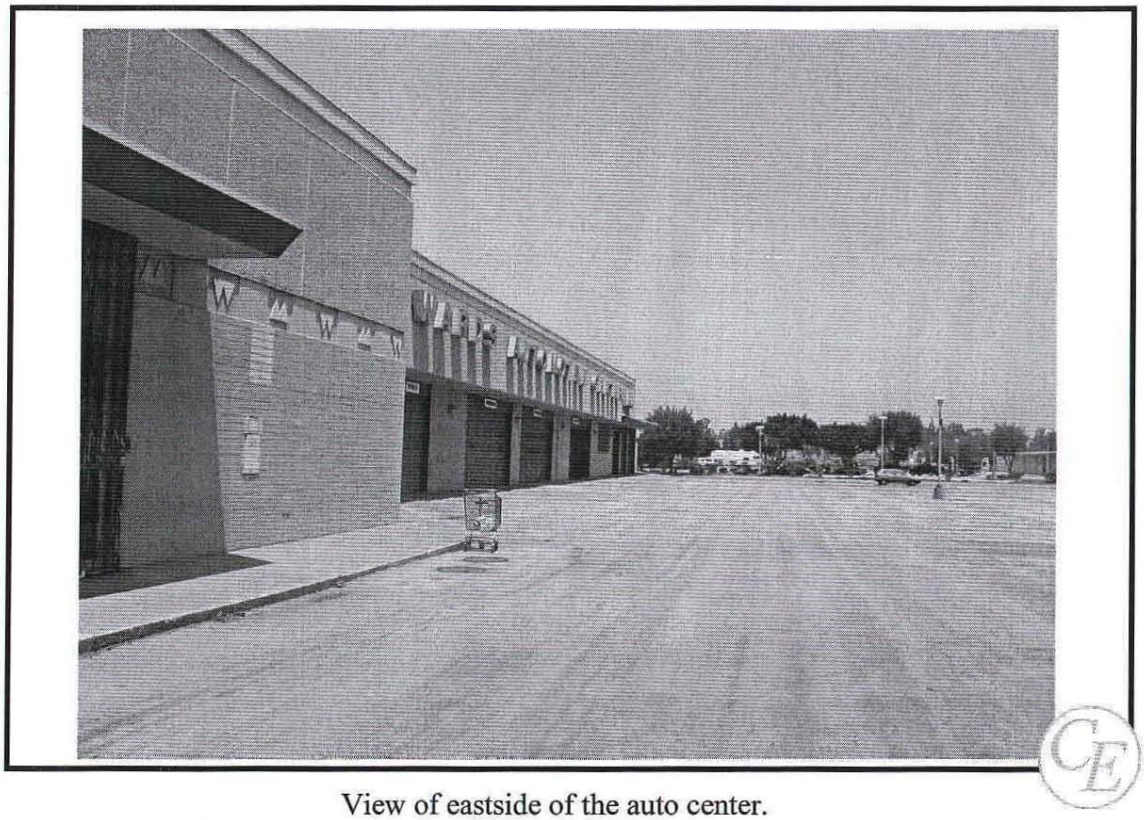
- OSHA Standard 29 CFR 1910.20 Hazardous Waste-Operations & Emergency Response
- Field Operations for Emergency Response
- DOT HM 126 F, Handling & Transportation of Hazardous Materials
- America Red Cross-CPR and First Aid Certification
- Disaster Service Worker, Community Emergency Response Team

ILLUSTRATIONS

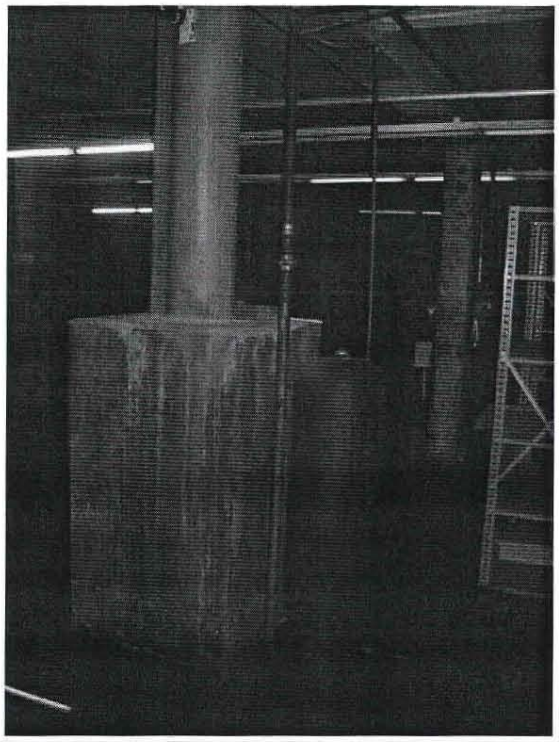
Site Photographs – Plates 1-8
Logs of Borings 9-17
Vicinity Map
Plot Plan
Plot Plan Detail
Closure Boring Plot Plan



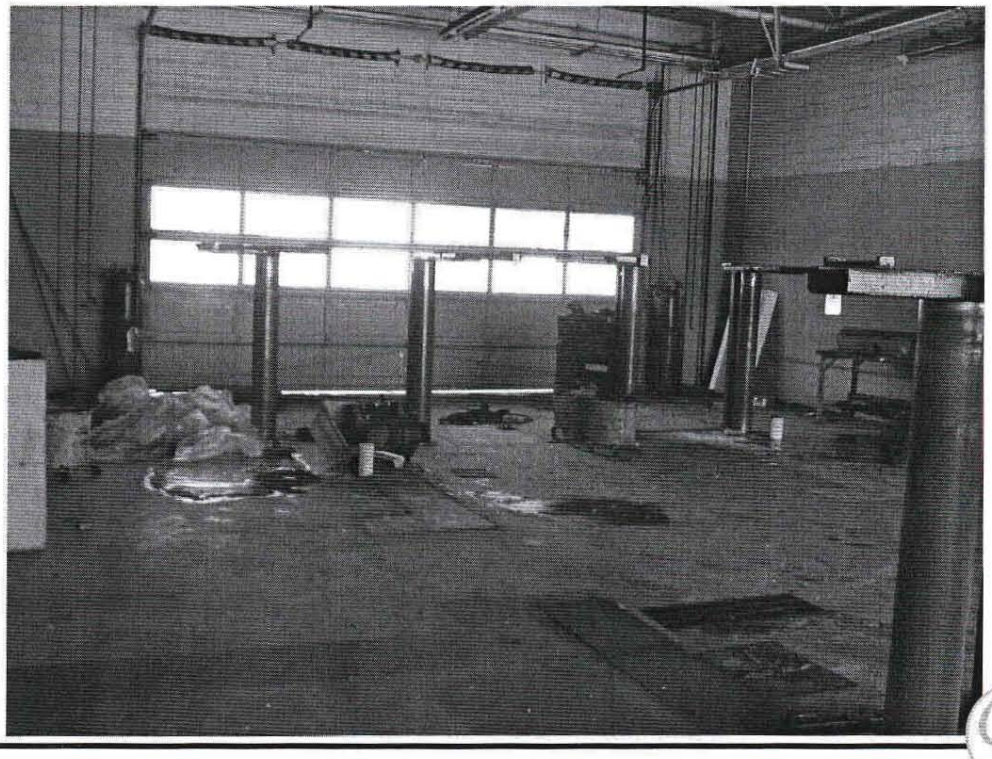
View of channel west of auto center.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



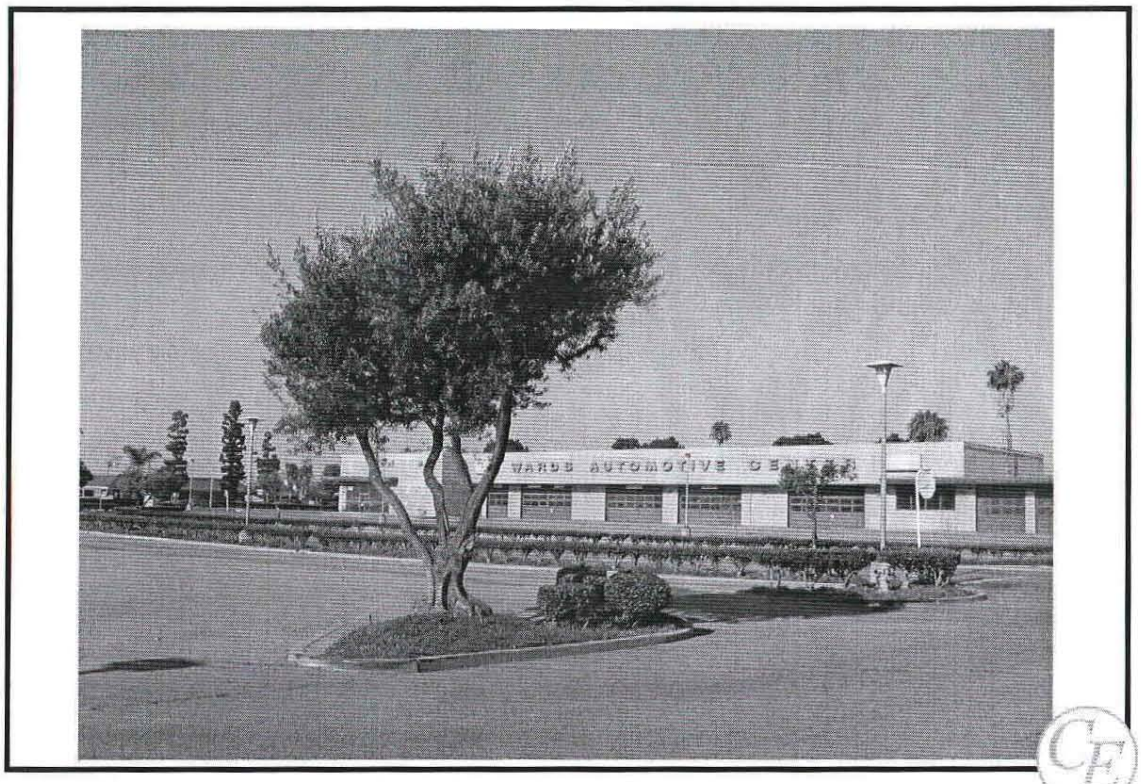
View of eastside of the auto center.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



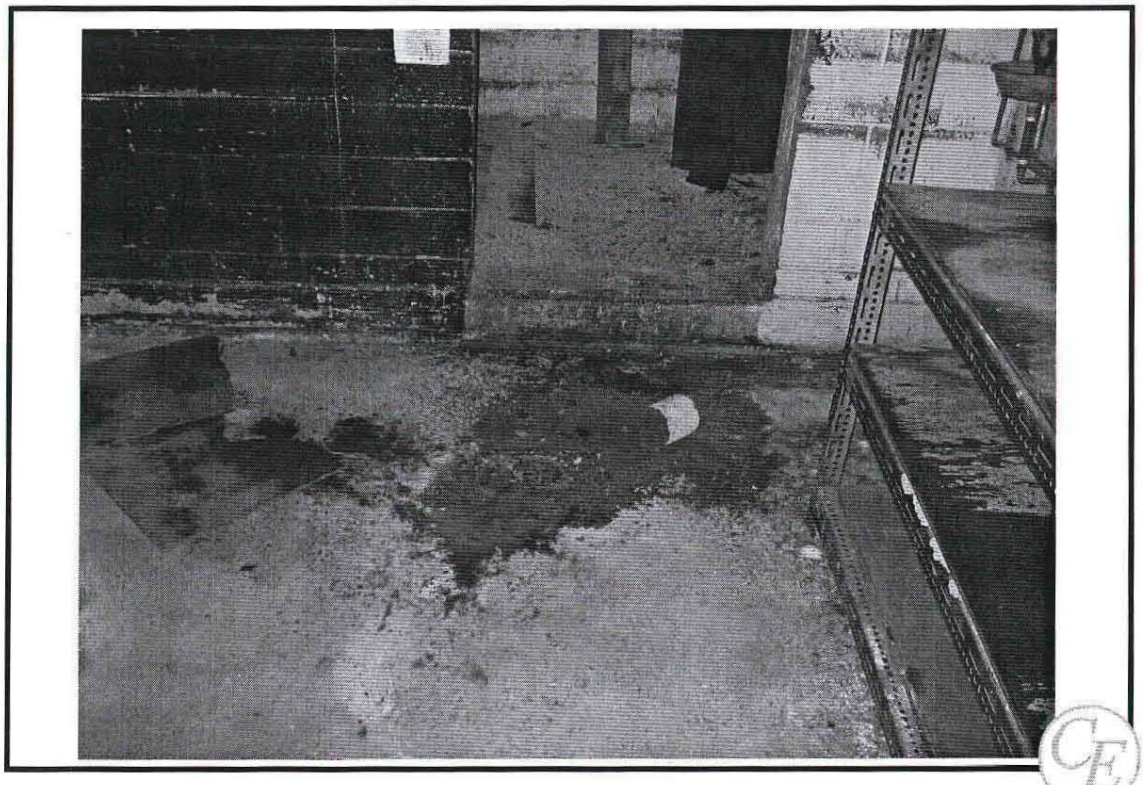
Hydraulic lift-basement view.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



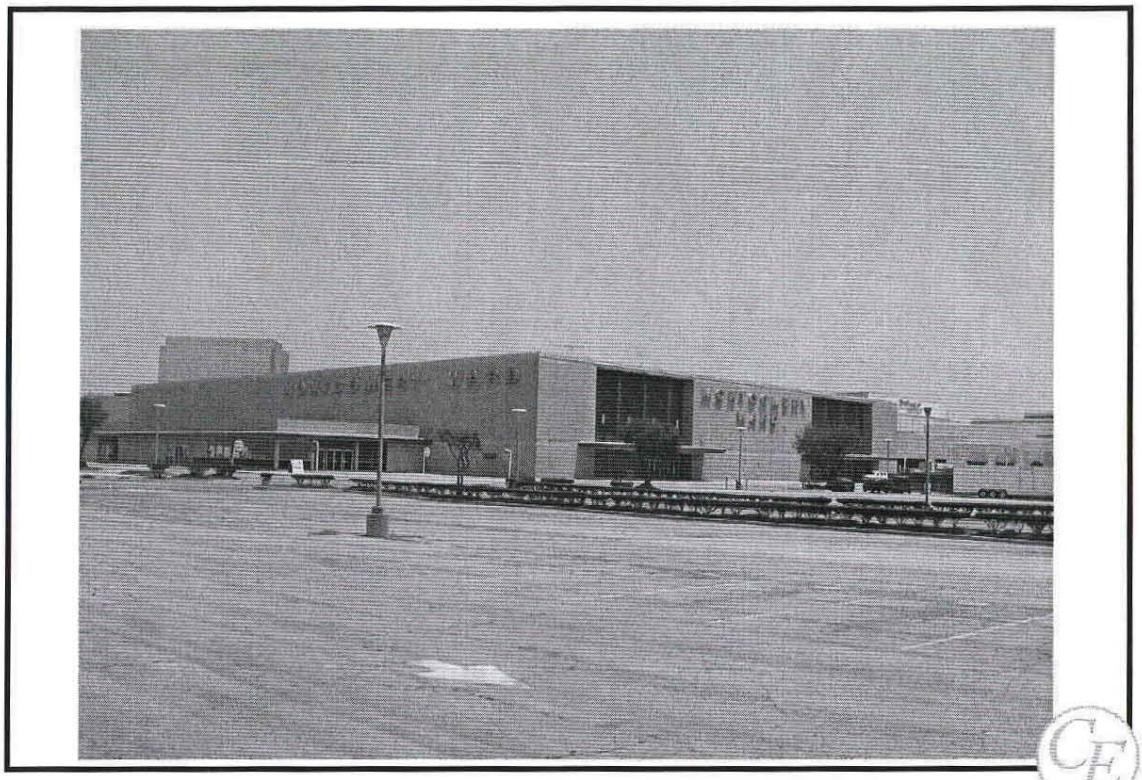
Hydraulic lifts - auto center.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



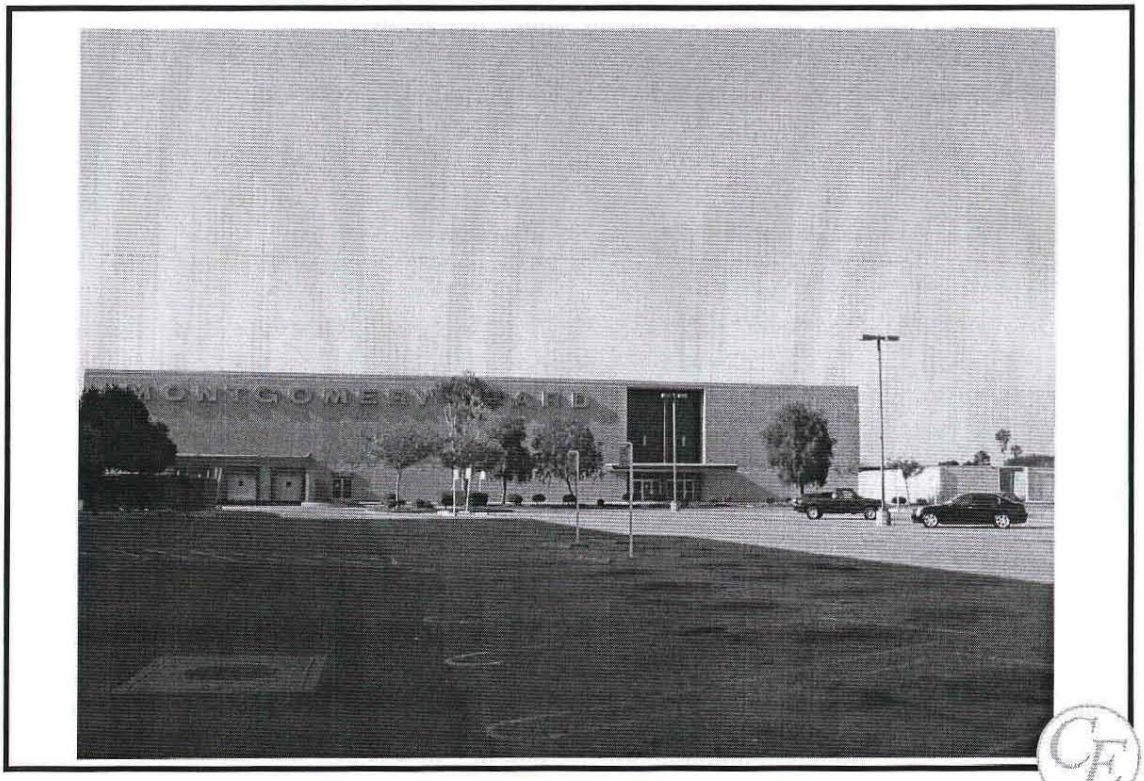
View of auto center to the southwest.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



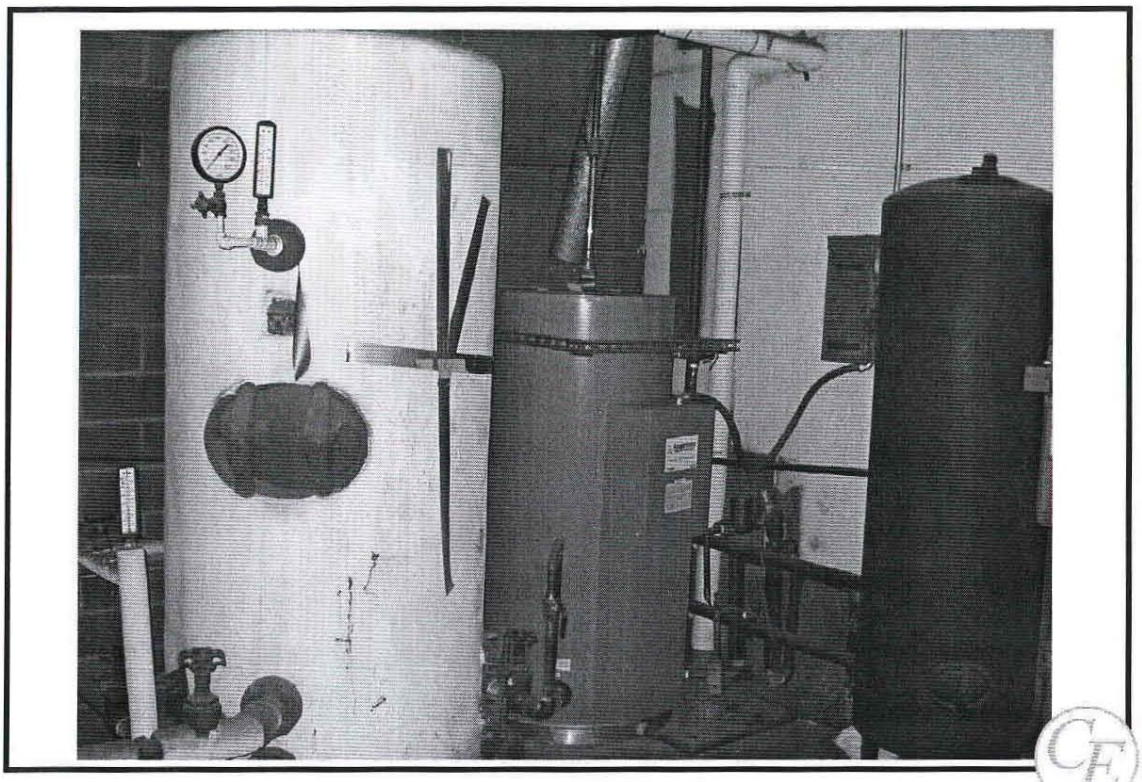
Battery room - auto center.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



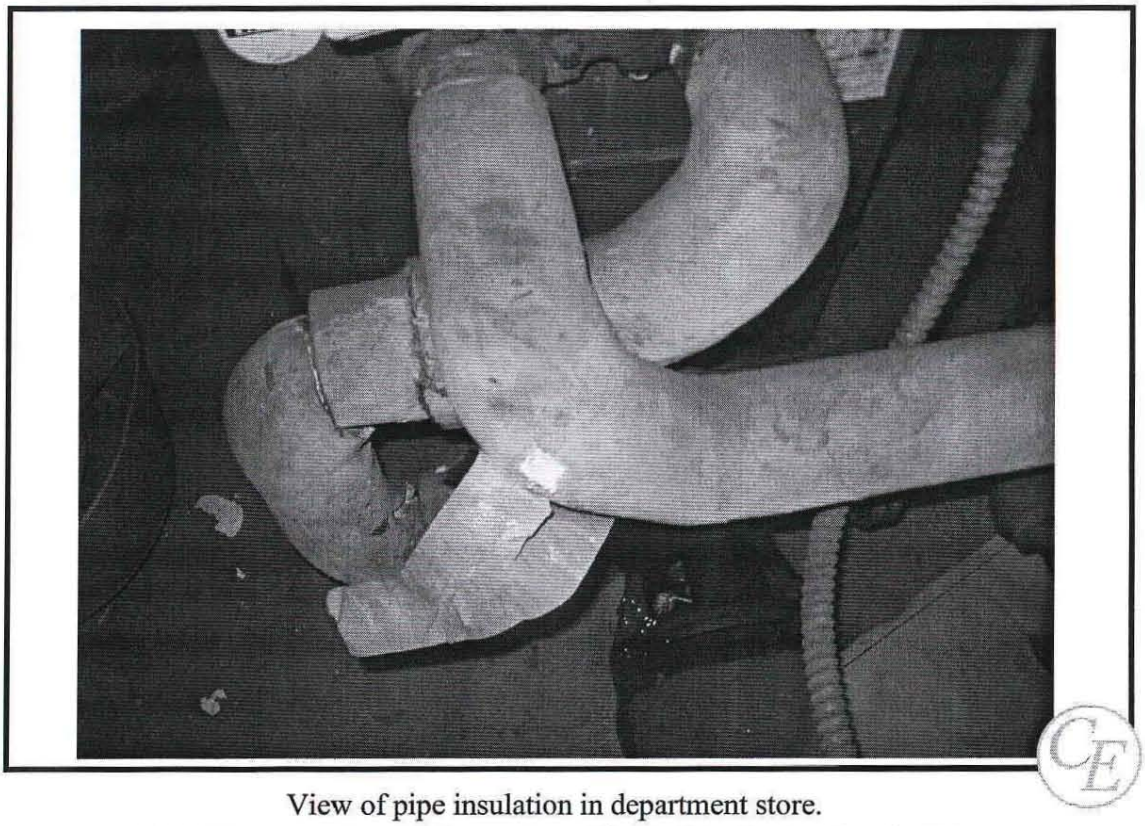
View of department store building.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



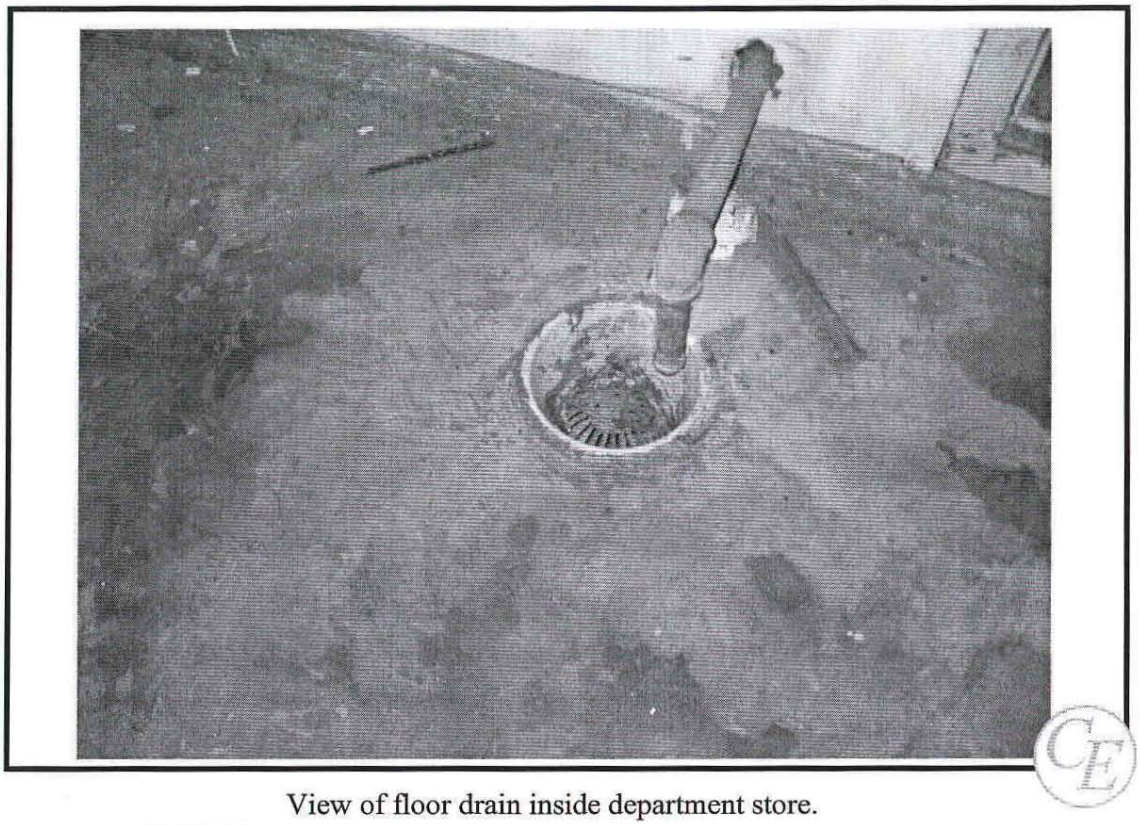
View of department store building to the west.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



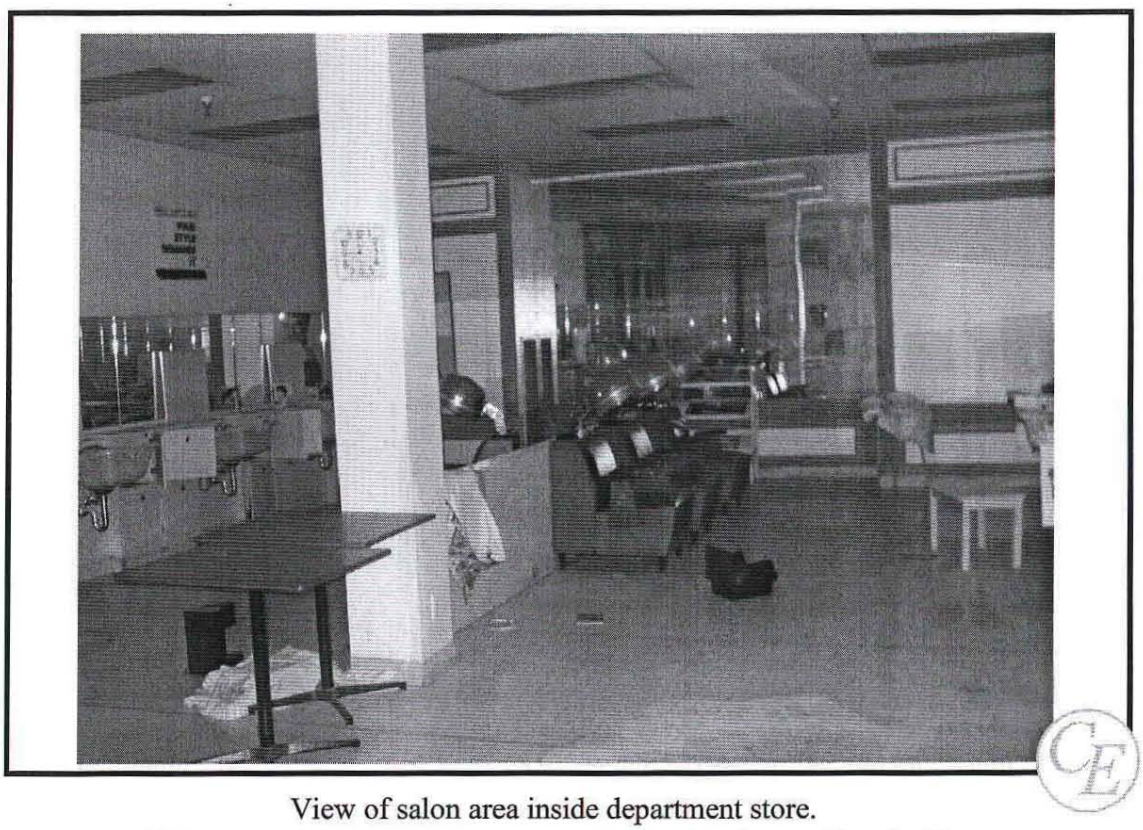
View of insulation, hot water system in department store.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



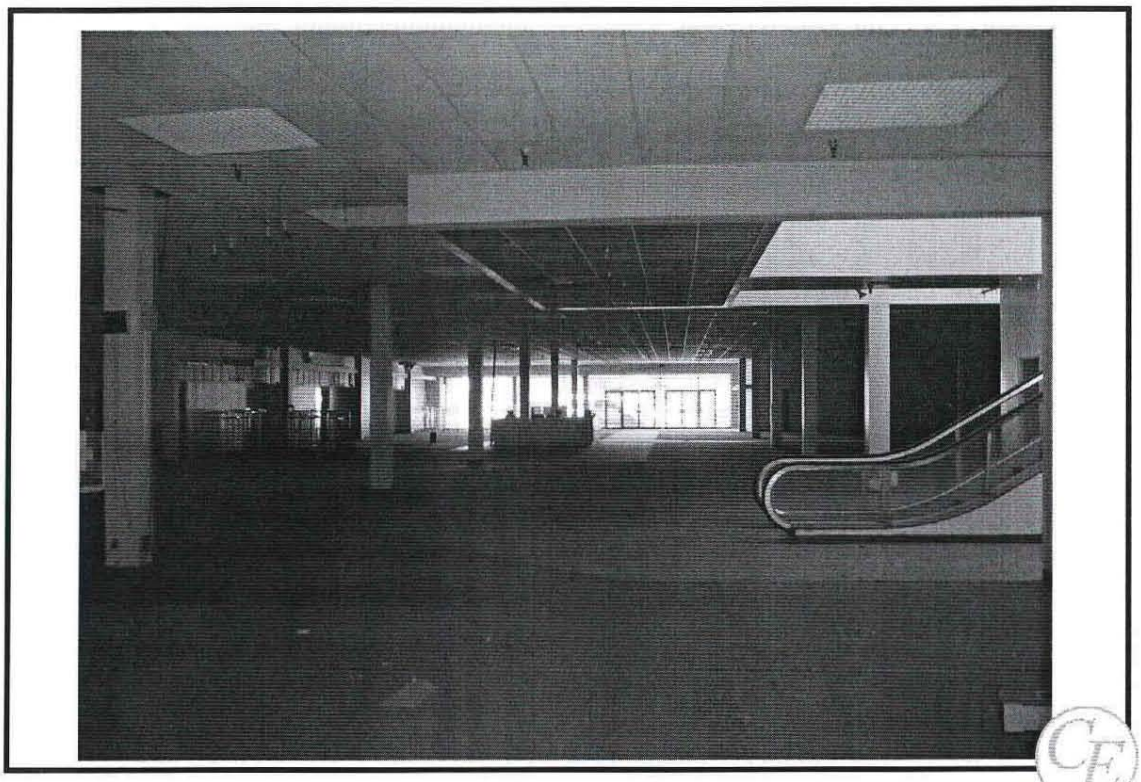
View of pipe insulation in department store.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



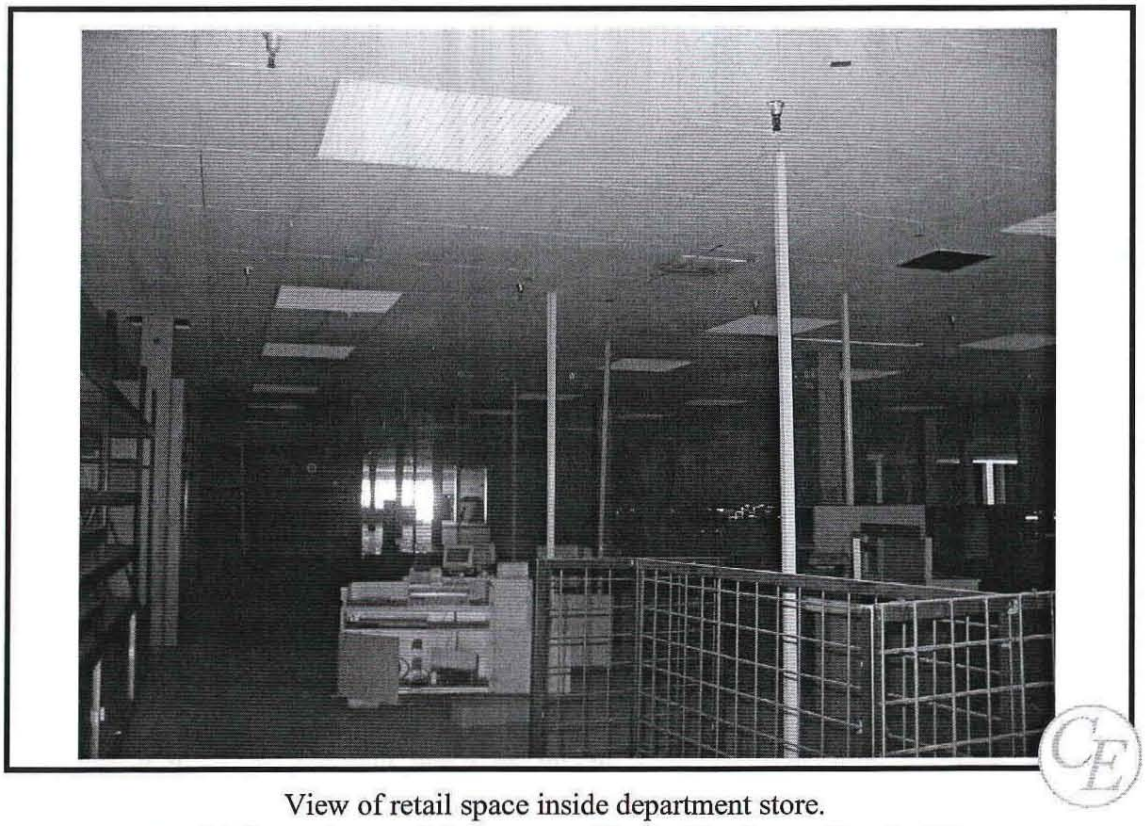
View of floor drain inside department store.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



View of salon area inside department store.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA

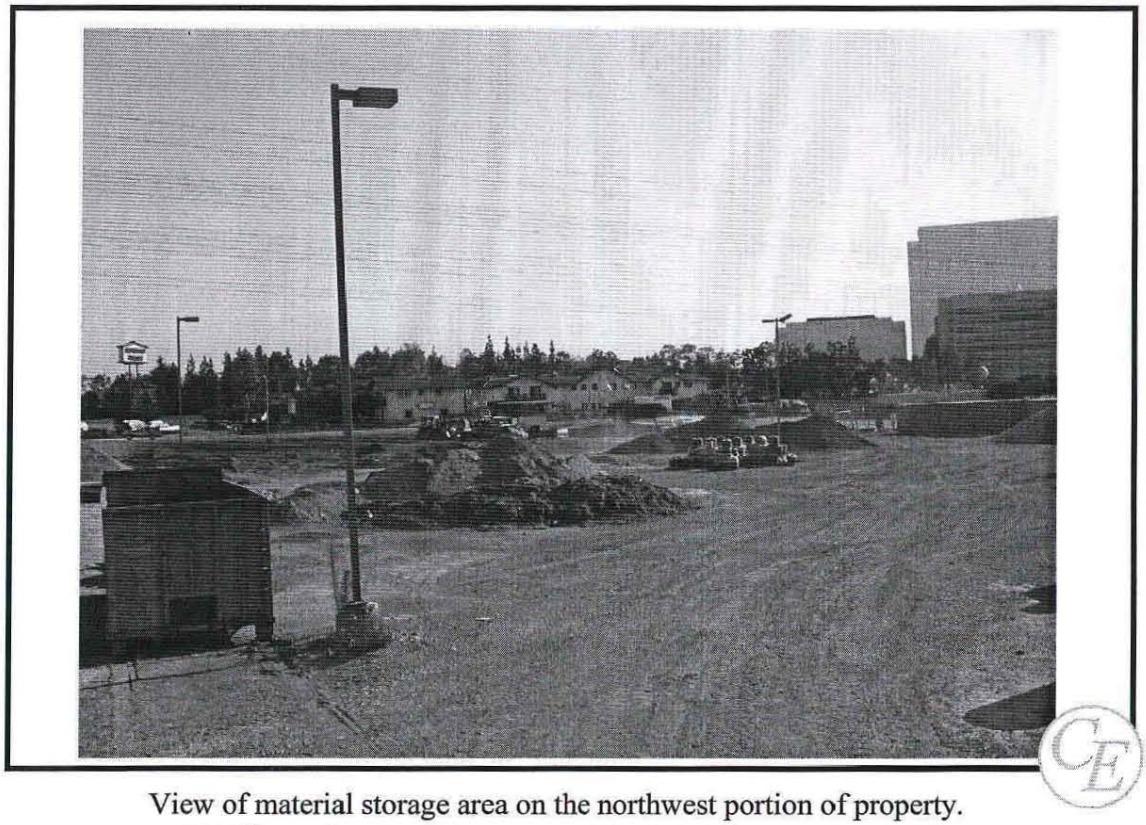


View of retail space inside department store.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



View of retail space inside department store.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA

View of material storage area on the northwest portion of property.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA



View of material storage area on the northwest portion of property.
7777 Edinger Avenue-Montgomery Wards, Huntington Beach, CA

LOG OF BORING CESB1

JOB NUMBER:	EP102-2345	**DATE:**	7/18/2005
CLIENT NAME:	Huntington Center Associates LLC	**DRILL RIG:**	Hydraulic Push
SITE ADDRESS:	7777 Edinger Avenue Huntington Beach, CA 92647	**SAMPLING METHOD:**	2 ft. Acetate Liner
LOGGED BY:	Mark Tamberino Environmental Technician	**BORING DIAMETER:**	2 inch
		SURFACE CONDITIONS:	Asphalt
REVIEWED BY:	Charles I. Buckley, CHG No. 55 REA II No. 20116		

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Blows per Foot	Graphic Log	Well Diagram
0							
1							
2	SD	Silty sand, light brown, moist, medium dense.	SM				
3							
4							
5	SD	Fine, silty sand, light gray, moist, dense with silty clay, hydrocarbon odor.	SM				
6							
7							
8							
9							
10	SD	Clayey silt, dark gray, very moist, highly organic, degraded gasoline odor.	ML				
11							
12							
13							
14							
15	SD	Silty clay, dark gray, moist, highly organic (~10%), no hydrocarbon odor.	CL				
16		End @ 15 ft., hydrocarbon odor 5-12 ft.					
17							
18							
19							
20							
21							
22							
23							
24							
25							

†Sample Type: S=Soil W=Water V=Vapor D=Drive G=Grab N=No Recovery

PLATE 9

LOG OF BORING CESB2

JOB NUMBER:	EP102-2345	**DATE:**	7/18/2005
CLIENT NAME:	Huntington Center Associates LLC	**DRILL RIG:**	Hydraulic Push
SITE ADDRESS:	7777 Edinger Avenue Huntington Beach, CA 92647	**SAMPLING METHOD:**	2 ft. Acetate Liner
LOGGED BY:	Mark Tamberino Environmental Technician	**BORING DIAMETER:**	2 inch
		SURFACE CONDITIONS:	Asphalt
REVIEWED BY:	Charles I. Buckley, CHG No. 55 REA II No. 20116		

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Blows per Foot	Graphic Log	Well Diagram
0							
1							
2	SD	Silty sand, light brown, medium dense, no hydrocarbon odor.	SM				
3							
4							
5	SD	Silty clay, light gray and brown with moist, no hydrocarbon odor.	CL				
6							
7							
8							
9							
10	SD	Clayey silt with fine sand, gray with moisture, no hydrocarbon odor.	ML				
11							
12							
13							
14							
15	SD	Clayey silt with fine sand, gray, very moist, with peat layers.	ML				
16		End @ 15 ft., no hydrocarbon odor.					
17							
18							
19							
20							
21							
22							
23							
24							

†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery

PLATE 10

LOG OF BORING CESB3

JOB NUMBER:	EP102-2345	**DATE:**	7/18/2005
CLIENT NAME:	Huntington Center Associates LLC	**DRILL RIG:**	Hydraulic Push
SITE ADDRESS:	7777 Edinger Avenue Huntington Beach, CA 92647	**SAMPLING METHOD:**	2 ft. Acetate Liner
LOGGED BY:	Mark Tamberino Environmental Technician	**BORING DIAMETER:**	2 inch
		SURFACE CONDITIONS:	Asphalt
REVIEWED BY:	Charles I. Buckley, CHG No. 55 REA II No. 20116		

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Blows per Foot	Graphic Log	Well Diagram
0							
1							
2	SD	Clayey silt, medium brown, slight moisture and firm, no hydrocarbon odor.	ML				
3							
4							
5	SD	Clayey silt, dark gray-black, slight moisture, degraded hydrocarbon odor.	ML				
6							
7							
8							
9							
10	SD	Silty sand, gray, very moist, no hydrocarbon odor.	SM				
11							
12							
13							
14							
15	SD	Silty clay, gray, moist, no hydrocarbon odor.	CL				
16		Slight hydrocarbon odor @ 5 ft.					
17							
18							
19							
20							
21							
22							
23							
24							

†Sample Type: S=Soil W=Water V=Vapor D=Drive G=Grab N=No Recovery

PLATE 11

LOG OF BORING CESB4

JOB NUMBER:	EP102-2345	**DATE:**	7/18/2005
CLIENT NAME:	Huntington Center Associates LLC	**DRILL RIG:**	Hydraulic Push
SITE ADDRESS:	7777 Edinger Avenue Huntington Beach, CA 92647	**SAMPLING METHOD:**	2 ft. Acetate Liner
LOGGED BY:	Mark Tamberino Environmental Technician	**BORING DIAMETER:**	2 inch
		SURFACE CONDITIONS:	Asphalt
REVIEWED BY:	Charles I. Buckley, CHG No. 55 REA II No. 20116		

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Blows per Foot	Graphic Log	Well Diagram
0							
1							
2	SD	Clayey silt, medium brown, moist, firm, no hydrocarbon odor.	ML				
3							
4							
5	SD	Clayey silt, gray to brown, slight moisture, no hydrocarbon odor.	ML				
6							
7							
8							
9							
10	SD	Silty sand, gray very moist, no hydrocarbon odor.	SM				
11							
12							
13							
14							
15	SD	Silty clay, gray, slight moisture, no hydrocarbon odor.	CL				
16		End @ 15 ft., no hydrocarbon odor.					
17							
18							
19							
20							
21							
22							
23							
24							
25							

†Sample Type: S=Soil W=Water V=Vapor D=Drive G=Grab N=No Recovery

PLATE 12

LOG OF BORING CESB5

JOB NUMBER:	EP102-2345	**DATE:**	7/18/2005
CLIENT NAME:	Huntington Center Associates LLC	**DRILL RIG:**	Hydraulic Push
SITE ADDRESS:	7777 Edinger Avenue Huntington Beach, CA 92647	**SAMPLING METHOD:**	2 ft. Acetate Liner
LOGGED BY:	Mark Tamberino Environmental Technician	**BORING DIAMETER:**	2 inch
		SURFACE CONDITIONS:	Asphalt
REVIEWED BY:	Charles I. Buckley, CHG No. 55 REA II No. 20116		

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Blows per Foot	Graphic Log	Well Diagram
0							
1							
2	SD	Clayey silt, brown, moist, no hydrocarbon odor.	ML				
3							
4							
5	SD	Clayey silt, brown, some black, moist, no hydrocarbon odor.	ML				
6							
7							
8							
9							
10	SD	Clayey silt, brown, some black, moist, no hydrocarbon odor.	ML				
11							
12							
13							
14							
15	SD	Clayey silt, gray, slight moisture, slight hydrocarbon odor.	ML				
16		End @ 15 ft., slight odor @ 15 ft.					
17							
18							
19							
20							
21							
22							
23							
24							
25							

†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery

PLATE 13

LOG OF BORING CESB6

JOB NUMBER:	EP102-2345	**DATE:**	7/18/2005
CLIENT NAME:	Huntington Center Associates LLC	**DRILL RIG:**	Hydraulic Push
SITE ADDRESS:	7777 Edinger Avenue Huntington Beach, CA 92647	**SAMPLING METHOD:**	2 ft. Acetate Liner
LOGGED BY:	Mark Tamberino Environmental Technician	**BORING DIAMETER:**	2 inch
		SURFACE CONDITIONS:	Asphalt
REVIEWED BY:	Charles I. Buckley, CHG No. 55 REA II No. 20116		

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Blows per Foot	Graphic Log	Well Diagram
0							
1							
2	SD	Clayey silt, brown, moist, no hydrocarbon odor.	ML				
3							
4							
5	SD	Clayey silt, brown, moist, no hydrocarbon odor.	ML				
6							
7							
8							
9							
10	SD	Clayey silt, brown, moist, no hydrocarbon odor.	ML				
11							
12							
13							
14							
15	SD	Clayey silt, gray, moist, no hydrocarbon odor.	ML				
16		End @ 15 ft., no hydrocarbon odor.					
17							
18							
19							
20							
21							
22							
23							
24							
25							

†Sample Type: S=Soil W=Water V=Vapor D=Drive G=Grab N=No Recovery

PLATE 14

LOG OF BORING CESB7

JOB NUMBER:	EP102-2345	**DATE:**	7/18/2005
CLIENT NAME:	Huntington Center Associates LLC	**DRILL RIG:**	Hydraulic Push
SITE ADDRESS:	7777 Edinger Avenue Huntington Beach, CA 92647	**SAMPLING METHOD:**	2 ft. Acetate Liner
LOGGED BY:	Mark Tamberino Environmental Technician	**BORING DIAMETER:**	2 inch
		SURFACE CONDITIONS:	Asphalt
REVIEWED BY:	Charles I. Buckley, CHG No. 55 REA II No. 20116		

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Blows per Foot	Graphic Log	Well Diagram
0							
1							
2	SD	Clayey silt, brown, moist, no hydrocarbon odor.	ML				
3							
4							
5	SD	Clayey silt, brown, some black, moist, no hydrocarbon odor.	ML				
6							
7							
8							
9							
10	SD	Clayey silt, brown, some black, moist, no hydrocarbon odor.	ML				
11							
12							
13							
14							
15	SD	Clayey silt, gray, slight moist.	CL				
16		End @ 15 ft., no odor.					
17							
18							
19							
20							
21							
22							
23							
24							
25							

†Sample Type: S=Soil W=Water V=Vapor D=Drive G=Grab N=No Recovery

PLATE 15

LOG OF BORING CESB8

JOB NUMBER:	EP102-2345	**DATE:**	7/18/2005
CLIENT NAME:	Huntington Center Associates LLC	**DRILL RIG:**	Hydraulic Push
SITE ADDRESS:	7777 Edinger Avenue Huntington Beach, CA 92647	**SAMPLING METHOD:**	2 ft. Acetate Liner
LOGGED BY:	Mark Tamberino Environmental Technician	**BORING DIAMETER:**	2 inch
		SURFACE CONDITIONS:	Asphalt
REVIEWED BY:	Charles I. Buckley, CHG No. 55 REA II No. 20116		

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Blows per Foot	Graphic Log	Well Diagram
0							
1							
2							
3							
4							
5	SD	Silty clay, light brown, little moisture.	CL				
6							
7							
8							
9							
10	SD	Clayey silt, light gray, wet.	ML				
11							
12							
13							
14							
15	SD	Sandy silt, gray, wet, slight odor.	ML				
16		End @ 15 ft., slight odor @ 15 ft.					
17							
18							
19							
20							
21							
22							
23							
24							
25							

†Sample Type: S=Soil W=Water V=Vapor D=Drive G=Grab N=No Recovery

PLATE 16

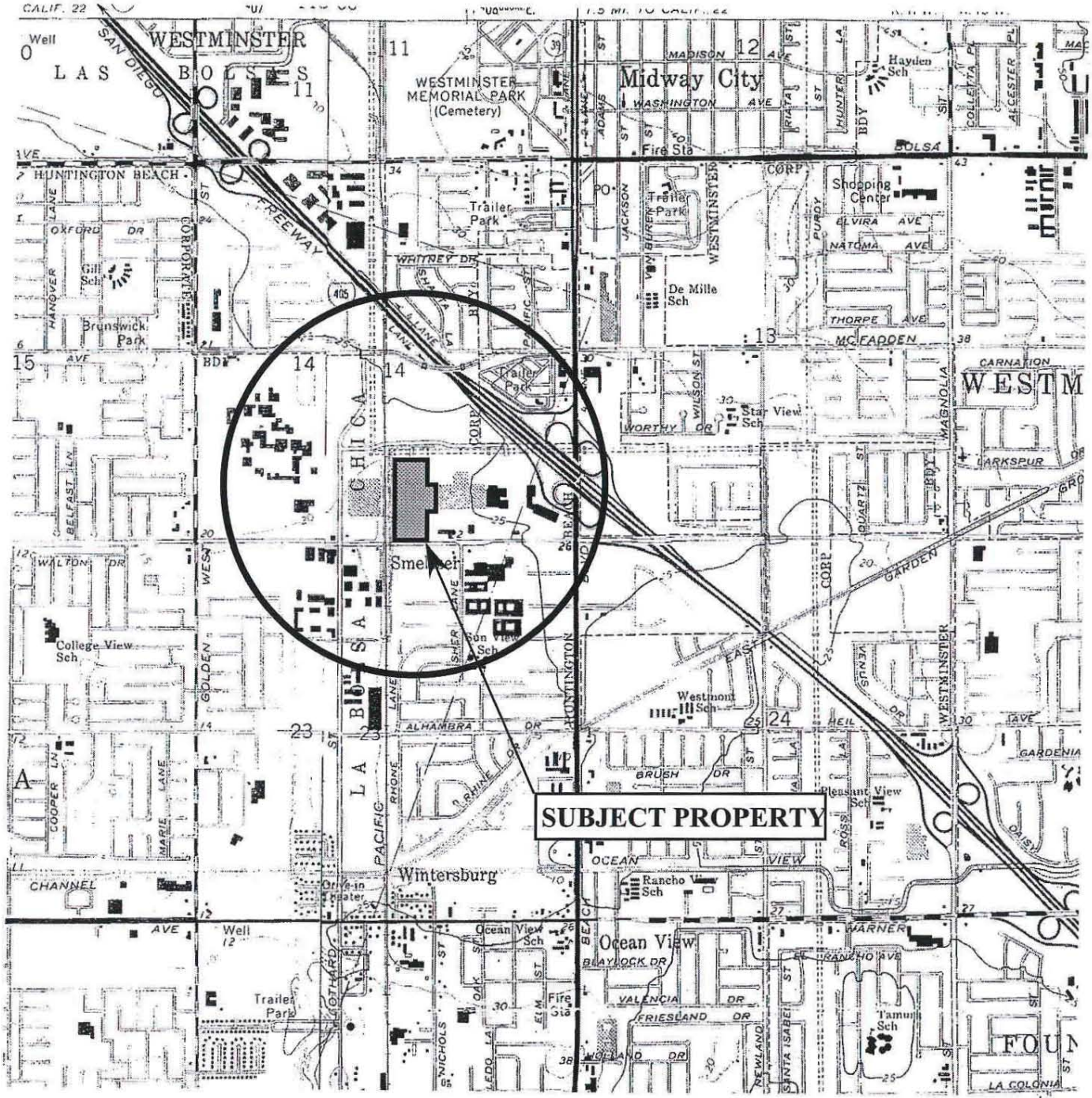
LOG OF BORING CESB9

JOB NUMBER:	EP102-2345	**DATE:**	7/18/2005
CLIENT NAME:	Huntington Center Associates LLC	**DRILL RIG:**	Hydraulic Push
SITE ADDRESS:	7777 Edinger Avenue Huntington Beach, CA 92647	**SAMPLING METHOD:**	2 ft. Acetate Liner
LOGGED BY:	Mark Tamberino Environmental Technician	**BORING DIAMETER:**	2 inch
		SURFACE CONDITIONS:	Asphalt
REVIEWED BY:	Charles I. Buckley, CHG No. 55 REA II No. 20116		

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Blows per Foot	Graphic Log	Well Diagram
0							
1							
2							
3							
4							
5	SD	Silty sand, light brown, moist, medium dense.	SM				
6							
7							
8	SD	Silty sand, light brown, moist, medium dense.	SM				
9							
10							
11							
12	SD	Silty sand, wet, dark brown-black, wet, medium dense.	SM				
13		End @ 12 ft., no odor.					
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

†Sample Type: S=Soil W=Water V=Vapor D=Drive G=Grab N=No Recovery

PLATE 17



Scale
1 inch = 2,000 feet

Reference: USGS 7.5' Huntington Beach and Seal Beach Topographic Quadrangle, 1965 (photorevised 1972)

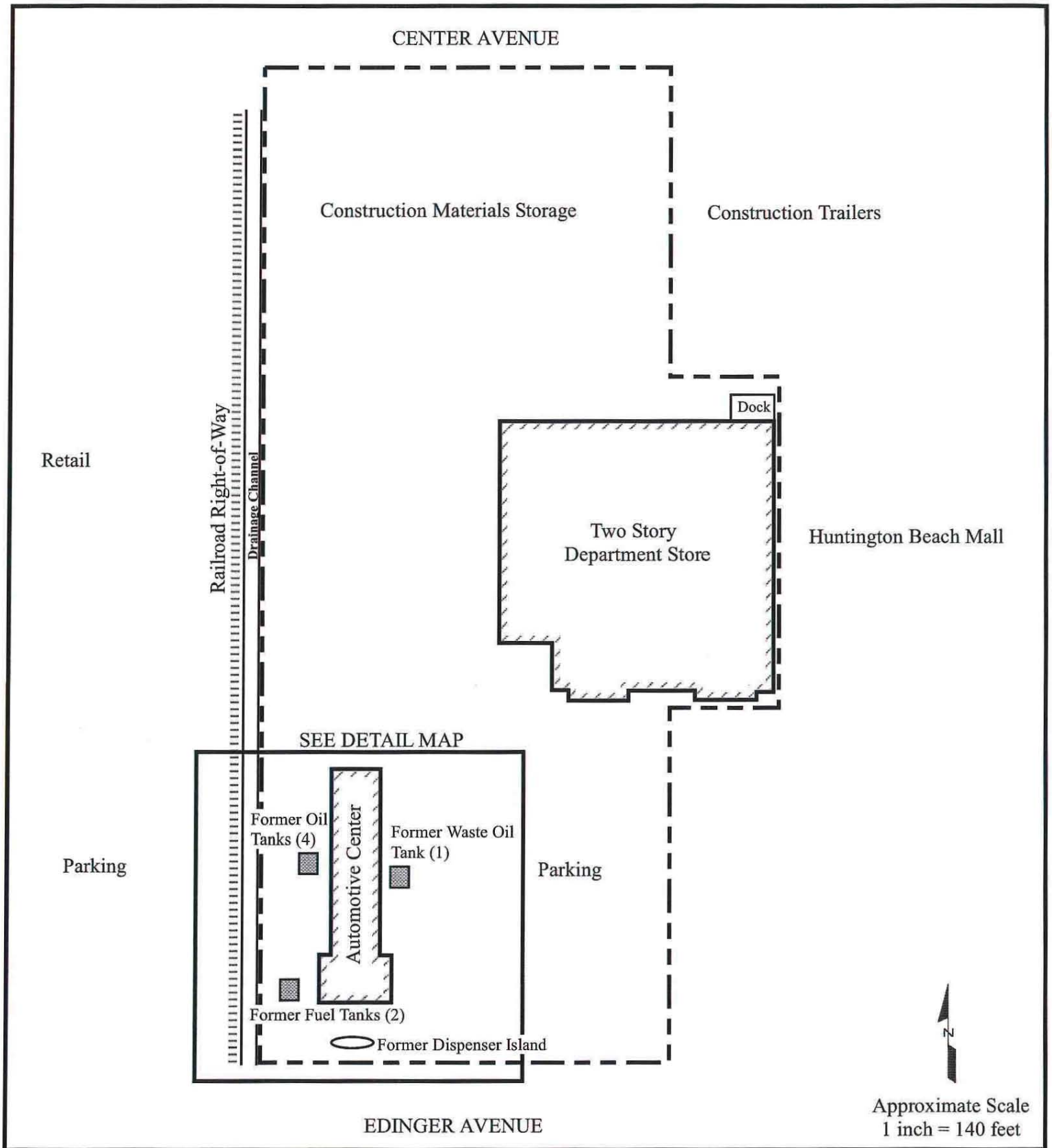
VICINITY MAP

777 Edinger Avenue - Montgomery Wards
Huntington Beach, California

Drawn By: CGL	**Job #** EP102-2345
Checked By: CIB	**Date:** SEPTEMBER 2005

California Environmental

2345 Vicinity Map

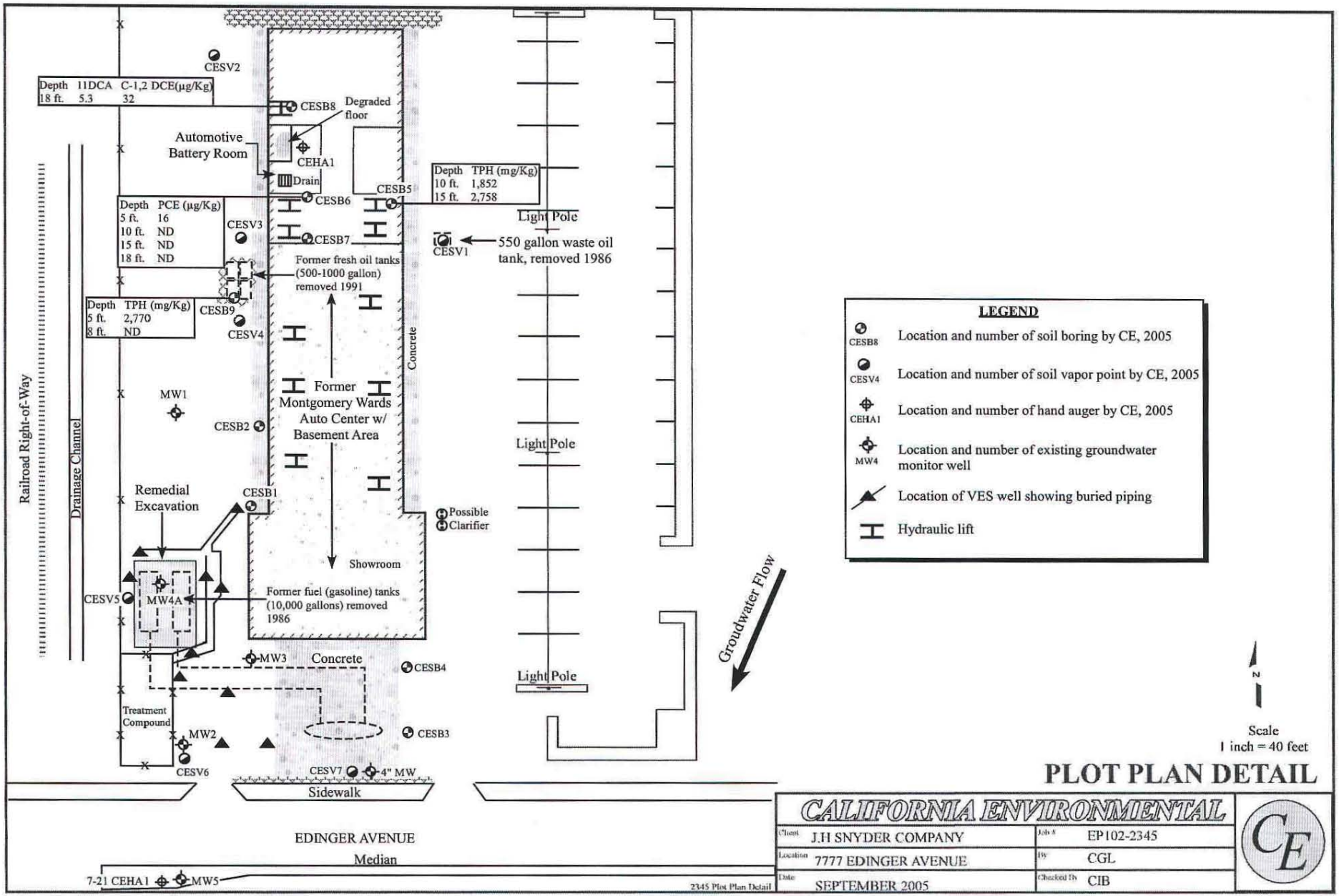


PLOT PLAN
7777 Edinger Avenue - Montgomery Wards
Huntington Beach, California

Drawn By: CGL	**Job #** EP102-2345
Checked By: CIB	**Date:** SEPTEMBER 2005

California Environmental

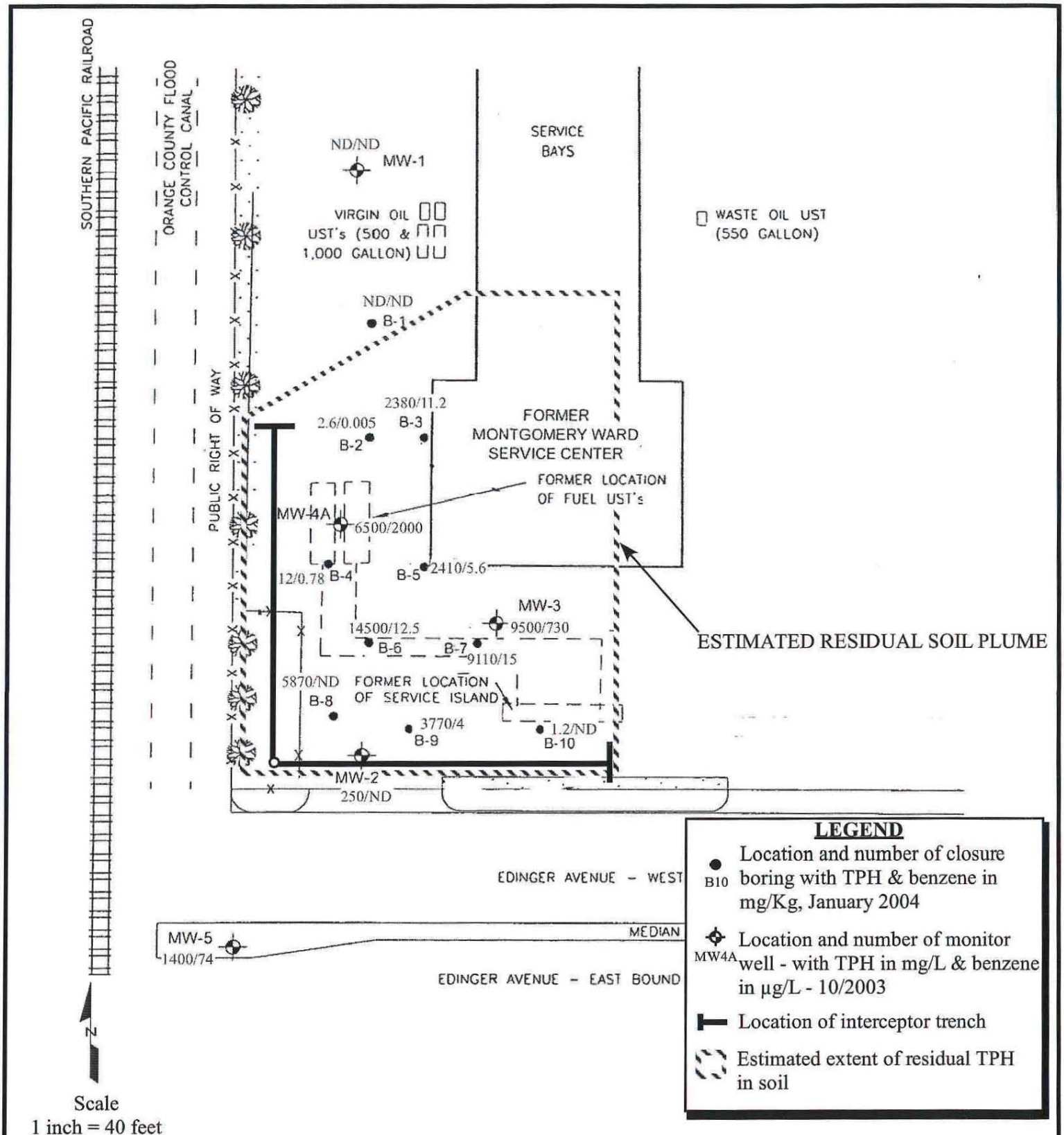
2345 Montgomery Ward Plot Plan



PLOT PLAN DETAIL

CALIFORNIA ENVIRONMENTAL			
Client	J.H SNYDER COMPANY	Job #	EP102-2345
Location	7777 EDINGER AVENUE	By	CGL
Date	SEPTEMBER 2005	Checked By	CIB

2345 Plot Plan Detail



Reference: ENSR International

CLOSURE BORING PLOT PLAN
MONTGOMERY WARDS
7777 Edinger Avenue
Huntington Beach, California

Drawn By:	Job #
CGL	EP102-2345
Checked By:	**Date:**
CIB	SEPTEMBER 2005

California Environmental